

<b>SOLICITATION, OFFER AND AWARD</b>		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)		RATING DO-C9E		PAGE OF 1 60 PAGES	
2. CONTRACT NO.		3. SOLICITATION NO. N00164-98-R-0027		4. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)		5. DATE ISSUED 050798	
7. ISSUED BY CONTRACTING OFFICER, CODE 1164EF NAVSURFWARCENDIV 300 HIGHWAY 361 CRANE IN 47522-5011		CODE N00164		6. REQUISITION/PURCHASE NO. N/A		8. ADDRESS OFFER TO (If other than Item 7) SAME AS ITEM 7 EXCEPT MARK "BID ROOM DEPOSITORY"	

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

### SOLICITATION

9. Sealed offers in original and 2 copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if handcarried, in the depository located in BUILDING 64 until 2:00 PM local time 06/08/98  
(Hour) (Date)

CAUTION - LATE Submissions, Modifications, and Withdrawals: Section L, Provision No. 52.214-7 or 52.215-10.  
All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL:	A. NAME J.D. MARTIN	B. TELEPHONE NO. (Include area code) (NO COLLECT CALLS) (812)854-3723
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### OFFER (Must be fully completed by offeror)

NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.

12. In compliance with the above, the undersigned agrees, if this offer is accepted within calendar days (50 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52.232-8)		10 CALENDAR DAYS	20 CALENDAR DAYS	30 CALENDAR DAYS	CALENDAR DAYS
		%	%	%	%
14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated:		AMENDMENT NO.	DATE	AMENDMENT NO.	DATE
15A. NAME AND ADDRESS OF OFFEROR	CODE	FACILITY	16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)		
15B. TELEPHONE NO. (Include area code)		15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE.		17. SIGNATURE	18. OFFER DATE

### AWARD (To be completed by Government)

19. ACCEPTED AS TO ITEMS NUMBERED		20. AMOUNT		21. ACCOUNTING AND APPROPRIATION	
22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304(c) <input type="checkbox"/> 10 U.S.C. 253(c)		23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)		ITEM	
24. ADMINISTERED BY (If other than Item 7)		CODE		25. PAYMENT WILL BE MADE BY	
				CODE	
26. NAME OF CONTRACTING OFFICER (Type or print)		27. UNITED STATES OF AMERICA (Signature of Contracting Officer)		28. AWARD DATE	

IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>AMOUNT</u>
0001	Research and Development. Professional, technical, and management efforts for the continued development of the Multi-Source Correlator Tracker Software Suite used by the United States Marine Corps Cooperative Engagement Capability (CEC) Program. All tasks will be required in accordance with the Statement of Work in Section "C" herein. Period of Performance is from the effective date of contract through two years thereafter. Data shall be provided under each Delivery Order (DO) in accordance with the Contract Data Requirements Lists (CDRLs) listed in Section "J" herein and as invoked in the individual DO.	1	LO	\$_____ (Est.)
0002	Same as item 0001. Option I, Contract Year 3.	1	LO	\$_____ (Est.)
0003	Same as item 0001. Option II, Contract Year 4.	1	LO	\$_____ (Est.)
0004	Same as item 0001. Option III, Contract Year 5.	1	LO	\$_____ (Est.)

## BEGINNING SECTION "B" NOTES

### SECTION "B" NOTES:

(1) The estimated direct labor hours by labor category and Other Direct Costs are included in Exhibit "B" which is attached hereto.

(2) List your five character Commercial and Government Entity (CAGE) Code and nine character DUNS Number in Block 15a of Page 1.

(3) SECTION "K" herein will be incorporated by reference and made a material part of any resultant contract in accordance with FAR 15.406-1(b).

(4) It is requested that technical questions concerning this procurement be submitted via e-mail to [martin\\_j@crane.navy.mil](mailto:martin_j@crane.navy.mil) at least seven calendar days prior to close of this solicitation.

(5) Options I, II, and III each cover a Period of Performance of one year. The Options may be exercised at any time prior to the expiration of the basic contract, or the previously exercised Option period, as applicable.

(6) The agency authorized to place delivery orders against this contract is: Crane Division, Naval Surface Warfare Center, Crane, IN 47522. Delivery Orders (DOs) will be placed against this contract using a DD 1155. DOs placed under this contract will be placed no later than two years (three, four or five years, depending on exercise of the options) from the effective date of contract, and all performance under the contract shall end within six months after the ordering period expires.

(7) It is anticipated that an indefinite-delivery, requirements contract will result from this solicitation. The contract will allow for the placement of fixed-price (FP) DOs, fixed-price-level-of-effort (FPLOE) DOs, cost-plus-fixed-fee (CPFF) DOs, and cost-plus-incentive-fee (CPIF) DOs. Accordingly, the basic contract will contain all clauses applicable to these various types of DOs. Only those clauses pertaining to the specific DO type will be automatically invoked by the individual DO.

(8) In Section "J" there is a sample DO Statement of Work (SoW) listed as an attachment. Offerors are required to submit a technical proposal on this sample DO SoW as part of their overall technical proposals. All offerors are required to provide their proposed technical approaches to perform the work required by the sample DO SoW. This shall include a

discussion of how the work would be performed as well as the materials, equipment, labor categories, labor hours and subcontractors that the offeror determines would be necessary to perform a DO if it were to result from the sample DO SoW. The proposal shall include any other information the offeror believes to be relevant. The technical proposals **shall not include** any direct labor rates, indirect rates, fee or any discussion of costs/dollars in any area. The requirements of the technical proposal are discussed in detail in Section "L" herein. The offeror shall only include direct rate information, indirect rate information and fee information in the Cost Proposal Worksheets provided as an exhibit hereto, also listed in section "J". The Cost Proposal Worksheets shall not be included as part of the technical proposal. In addition, a cost/price proposal for the Sample DO shall be submitted separately from the Sample DO technical proposal.

(9) In the spaces below, offerors shall provide the names, addresses, phone numbers, telefax numbers and, if available, points of contact of the cognizant Administrative Contracting Officer (ACO) at the Defense Contract Management Command (DCMC) and the cognizant auditor at the Defense Contract Audit Agency (DCAA) offices. It is requested that offerors provide copies of their cost proposal to the cognizant ACO at the DCMC office and the cognizant auditor at the DCAA office at the same time it is provided to the contracting agency. It is anticipated that this will help to expedite contract award.

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(10) Please note the clauses relative to data in Section "I" (252.227-7000 through 252.227-7039). The Government requests unlimited data rights for those data which are developed at Government expense.

(11) Any amendments to this solicitation will be posted on the world wide web. Hard copies will not be provided. It is the responsibility of prospective offerors to monitor the web site to determine if any amendments have been issued prior to closing.

**SPECIAL NOTICE** - The Director, Defense Procurement is proposing to revise the DFARS to require contractors to be registered in the Central Contractor Registration (CCR) as a condition for receipt of contract award. *The effective date would be 31 March 1998.* Exceptions to this proposal include purchases made with the Government-wide commercial purchase card, contracting officers located outside the United States, classified contracts and contracts executed to support contingency or emergency operations. Contractors may register with the CCR on World Wide Web at <http://www.acq.osd.mil/ec> or via dial up modem at **614-692-6788** (user ID: ccrpub; password: pub2ccr1). A paper form for registration may be requested from the DoD Electronic Commerce Information Center at **1-800-334-3414**.

#### **LIMITATION OF COST OR LIMITATION OF FUNDS LANGUAGE**

The clause entitled "LIMITATION OF COST" (FAR 52.232-20) or "LIMITATION OF FUNDS" (FAR 52.232-22), as appropriate, shall apply separately and independently to each separately identified estimated cost element, as applicable, on the DOs issued hereunder.

#### **PAYMENTS OF FEE(S) (COMPLETION) (NAVSEA) (MAY 1993)** (Note: Fill-ins to be completed at time of award)

(a) For purposes of this contract, "fee" means "target fee" in cost-plus-incentive-fee type contracts, "base fee" in cost-plus-award-fee type contracts, "fixed fee" in cost-plus-fixed-fee type contracts for completion and phase type contracts.

(b) The Government shall make payments to the Contractor, subject to and in accordance with the clause in this contract entitled "FIXED FEE" (FAR 52.216-8) or "INCENTIVE FEE", (FAR 52.216-10), as applicable. Such payments shall be equal to \_\_\_ percent (\_\_\_%) of the allowable cost of each invoice submitted by and payable to the Contractor pursuant to the clause of this contract entitled "ALLOWABLE COST AND PAYMENT" (FAR 52.216-7), subject to the withholding terms and conditions of the "FIXED FEE" or "INCENTIVE FEE" clause, as applicable (percentage of fee is based on fee dollars divided by estimated cost dollars, including facilities capital cost of money). Total fee(s) paid to the Contractor shall not exceed the fee amount(s) set forth in this contract.

(c) In the event of discontinuance of the work under this contract, or any specified phase of the contract, in accordance with the clause of this contract entitled "LIMITATION OF FUNDS" (FAR 52.232-22) or "LIMITATION OF COST" (FAR 52.232-20), as applicable, the fee shall be equitably adjusted by mutual agreement to reflect the diminution of work. If the adjusted fee is less than the sum of all fee payments made to the Contractor under this contract, the Contractor shall repay the excess amount to the Government. If the adjusted fee exceeds all payments made to the Contractor under this contract, the Contractor shall be paid the additional amount, subject to the availability of funds. In no event shall the Government be required to pay the Contractor any amount in excess of the funds obligated under this contract at the time of the discontinuance

of work.

(d) Fee(s) withheld pursuant to the terms and conditions of this contract shall not be paid until the contract has been modified to reduce the fee(s) in accordance with paragraph (c) above, or until the Procuring Contracting Officer has advised the paying office in writing that no fee adjustment is required.

**PAYMENTS OF FEE(S) (LEVEL OF EFFORT) (NAVSEA) (MAY 1993)** (Note: Fill-ins to be completed at time of award)

(a) For purposes of this contract, "fee" means "target fee" in cost-plus-incentive-fee type contracts, "base fee" in cost-plus-award-fee type contracts, or "fixed fee" in cost-plus-fixed-fee type contracts for level of effort type contracts.

(b) The Government shall make payments to the Contractor, subject to and in accordance with the clause in this contract entitled "FIXED FEE" (FAR 52.216-8) or "INCENTIVE FEE", (FAR 52.216-10), as applicable. Such payments shall be equal to \_\_ percent (\_\_%) of the allowable cost of each invoice submitted by and payable to the Contractor pursuant to the clause of this contract entitled "ALLOWABLE COST AND PAYMENT" (FAR 52.216-7), subject to the withholding terms and conditions of the "FIXED FEE" or "INCENTIVE FEE" clause, as applicable (percentage of fee is based on fee dollars divided by estimated cost dollars, including facilities capital cost of money). Total fee(s) paid to the Contractor shall not exceed the fee amount(s) set forth in this contract.

(c) The fee(s) specified in SECTION B, and payment thereof, is subject to adjustment pursuant to paragraph (g) of the special contract requirement entitled "LEVEL OF EFFORT." If the fee(s) is reduced and the reduced fee(s) is less than the sum of all fee payments made to the Contractor under this contract, the Contractor shall repay the excess amount to the Government. If the final adjusted fee exceeds all fee payments made to the contractor under this contract, the Contractor shall be paid the additional amount, subject to the availability of funds. In no event shall the Government be required to pay the Contractor any amount in excess of the funds obligated under this contract at the time of the discontinuance of work.

(d) Fee(s) withheld pursuant to the terms and conditions of this contract shall not be paid until the contract has been modified to reduce the fee(s) in accordance with the "LEVEL OF EFFORT" special contract requirement, or until the Procuring Contracting Officer has advised the paying office in writing that no fee adjustment is required.

**TRAVEL COSTS - ALTERNATE I (NAVSEA) (NOV 1996)**

(a) Except as otherwise provided herein, the Contractor shall be reimbursed for its reasonable actual travel costs in accordance with FAR 31.205-46. The costs to be reimbursed shall be those costs accepted by the cognizant DCAA.

(b) Reimbursable travel costs include only that travel performed from the Contractor's facility to the worksite, in and around the worksite, and from the worksite to the Contractor's facility.

(c) The Contractor shall not be reimbursed for:

- (i) relocation costs and travel costs incident to relocation as defined in FAR 31.205-35; and/or
- (ii) the following daily local travel costs:

- travel at U.S. Military Installations where Government transportation is available
- travel performed for personal convenience/errands, including commuting to and from work, and
- travel costs incurred in the replacement of personnel when such replacement is accomplished for the Contractor's or employee's convenience.

**EXPEDITING CONTRACT CLOSEOUT (NAVSEA) (DEC 1995)**

(a) As part of the negotiated fixed price or total estimated amount of this contract, both the Government and the Contractor have agreed to waive any entitlement that otherwise might accrue to either party in any residual dollar amount of \$500 or less at the time of final contract closeout. The term "residual dollar amount" shall include all money that would otherwise be owed to either party at the end of the contract except that, amounts connected in any way with taxation, allegations of fraud and/or antitrust violations shall be excluded. For purposes of determining residual dollar amounts, offsets of money owed by one party against money that would otherwise be paid by that party may be considered to the extent permitted by law.

(b) This agreement to waive entitlement to residual dollar amounts has been considered by both parties. It is agreed that the administrative costs for either part associated with collected such small dollar amounts could exceed the amount to be recovered.

**END OF SECTION "B"**

**BEGINNING OF SECTION "C"**

**SECTION "C" - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT**

**STATEMENT OF WORK  
FOR  
CONTINUED DEVELOPMENT  
OF THE  
Multi-Source Correlator Tracker Software Suite  
USED BY THE  
UNITED STATES MARINE CORPS  
COOPERATIVE ENGAGEMENT CAPABILITY PROGRAM**

May 12, 1998

Prepared By  
Naval Surface Warfare Center, Crane Division  
Code 7027  
Crane, IN 47522

## **1 SCOPE.**

This Statement of Work (SOW) sets forth the efforts required to provide non-personal technical and engineering services to the Naval Surface Warfare Center (NSWC) Crane Division. The efforts to be provided include software development, modification, evaluation, configuration management, quality assurance support, and on-site technical support for tests/demonstrations of the system software for the United States Marine Corps (USMC) Cooperative Engagement Capability (CEC) Program.

### **1.1 BACKGROUND.**

A need was identified by the USMC for a means of integrating the U.S. Navy's CEC system into the USMC Aviation Command Element (ACE). More specifically, to correlate information received from the Navy's CEC link and from various air defense data links which have been forwarded/routed, and to output the correlated, formatted information to the USMC CEC system display and workstation Local Area Network (LAN).

During FY '97, the Marine Corps Systems Command (MARCORSYSCOM) C4I -AD/FS tasked NSWC, Crane Division (NAVSURFWARCEMIV Crane) to develop a field-mobile laboratory system which would provide the USMC with capability to test/demonstrate a variety of approaches for integrating the Navy's CEC system into the ACE. The effort included the following:

- a. Integrating the Navy shipboard CEC suite into a set of 3 High Mobility Multipurpose Wheeled Vehicle (HMMWV) systems;
- b. Integrating a variant of the High Mobility Downsized Direct Air Support Central (HMD DASC) OE-334 communications system into a HMMWV system;
- c. Providing hardware and technical assistance to Raytheon E-Systems to accomplish the integration of an "airborne version" of the CEC into a HMMWV system;
- d. Integrating a "laboratory system" which included a HMMWV system, a tent and a set of transit case - mounted data link and display server hardware/software subsystems including the Air Defense System Integrator (ADSI), the Multi Source Correlator System (MSCS), the JTIDS Class II terminal, and the Multi-Source Correlator/Tracker (MSC/T) Software Suite.

During FY '97 MARCORSYSCOM demonstrated the USMC CEC prototype system at a variety of high visibility joint exercises including the All Services Combat Identification Evaluation Team (ASCIET 97), the joint cruise missile intercept live firing test, and the Joint Commanders Warfighting Conference.

The Operator's system, which is comprised of a file server, multiple workstations in a LAN configuration and a large screen display of the real time battlefield activities, was operated utilizing a prototype suite of software to be known as the Multi-Source Correlator/Tracker (MSC/T).

The MSC/T software suite resides upon a Sun SPARC Ultra II computer and serves as the operating software which correlates the information received from the Navy's CEC link and from various air defense data links which have been forwarded/routed from other Systems. The MSC/T then outputs correlated, formatted information to the USMC CEC system display and workstation LAN.

A critical software module within the MSC/T is the Tactical Display Framework (TDF) which is proprietary to the SOLIPSYS Corporation.

### **1.2 GOALS.**

The over-all goal of MARCORSYSCOM is to continue the integration of the CEC equipments/functions into the various USMC command & control and air defense systems.

One subsidiary goal is to acquire a complete set of equipment to support the development of the shore-based CEC applications. This dedicated equipment set will permit the return of all the equipment "borrowed" from other programs

(HMD DASC, ADCP, Avenger, Hawk, etc.) during FY 97. Utilization of a dedicated equipment set will dramatically reduce the logistics/programmatic issues, which often arise because of competing requirements for the same equipment.

One subsidiary goal is to continue to refine the software sets which perform the following functions:

- a. Correlation/routing/forwarding of both real time and non-real time (NRT) data link track information;
- b. Integration of other pertinent information sources into the overall display of the collection of information which comprises situational awareness for the ACE.

A second subsidiary goal is to continue to refine the hardware/software integration in order to accomplish the following objectives:

- a. Maximize mobility/minimize lift footprint;
- b. Maximize utility to the performance of all ACE command and control/air defense missions;
- c. Maximize interoperability with the Navy and other service branches;
- d. Maximize the reutilization of hardware/software solutions to mission requirements already fielded in legacy USMC systems;
- e. Maximize the availability of the pertinent information subsets from the shore-based CEC to appropriate users across the battlefield by developing technical solutions to accomplish the relay/dissemination of the information and the subsequent display of the information in a standardized format.

### **1.3 PURPOSE.**

The purpose of this SOW is to provide work statements necessary to acquire software and software support, which meets USMC CEC Program requirements as stated in this SOW. All requirements covered under this SOW will be initiated by means of separate delivery orders.

## **2 APPLICABLE DOCUMENTS.**

The following documents of the revision or issue in effect at the date of delivery order or as otherwise specified by the delivery order form a part of this Statement of Work to the extent described herein. In the event of conflict or inconsistency between this SOW and the referenced documents, this SOW shall take precedence.

### **2.1 SPECIFICATIONS.**

MIL-STD-498	Software Development and Documentation
MIL-STD-973	Configuration Management

## **3 REQUIREMENTS.**

The Contractor shall furnish all labor, materials, equipment, travel, and facilities, other than those listed in paragraph 4 as provided by the Government, to accomplish the efforts described by this SOW.

The USMC will have unlimited data and distribution rights to all software and documentation developed under this SOW.

### **3.1 MIL-STD COMPLIANCE.**

MIL-STD-498 Software Development and Documentation was tailored for this Statement of Work (SOW). MIL-STD-498 requirements not included in this SOW do not apply. Delivery Orders will be issued to initiate work requirements. An updated Software Development Plan (SDP) (CDRL A001) shall be delivered in response to each new Delivery Order.

#### **3.1.1 SOFTWARE DEVELOPMENT.**

The Contractor shall establish a software development process using MIL-STD-498 as guidance for any new software

development or modification to existing software. The Contractor shall fully describe how all “developer” tasks described in MIL-STD-498 will be performed (i.e., processes, methods, standards, tools, and schedules) in a Software Development Plan, or describe an alternative approach with supporting rationale, including the exclusion of tasks which add unnecessary cost, data, and any factors which do not add value. The plan is to be written in accordance with Data Item Description DI-IPSC-81427 (CDRL A001). Planning for Software Configuration Management (CM) and Software Quality Assurance (SQA) is included in the Software Development Plan (CDRL A001). However, if the Contractor utilizes separate CM and SQA plans which satisfy the SDP (CDRL A001) requirements, these plans may be referenced from the SDP and included as appendices. MIL-STD-973 shall be used as guidance in Configuration Management (CM) Planning. The Contractor shall perform all software development tasks in accordance with the approved plans or approach.

#### **3.1.1.1 SOFTWARE DEVELOPMENT ENVIRONMENT.**

Using MIL-STD-498 requirements as guidance, the Contractor shall establish a software development environment for software engineering, software test, software development library, software development files, and non-deliverable software for any new software development or modification to existing software.

#### **3.1.1.2 SOFTWARE REUSE.**

The Contractor shall describe in the Software Development Plan (CDRL A001) the process and considerations for ensuring a high degree of software reuse and the approach for technology insertion whereby future improvements can be incorporated into the software with minimal impact to the system configuration, operation and performance.

The Contractor shall provide information in accordance with Data Item Description DI-IPSC-81432 (CDRL A002) for all applicable items in the System/Subsystem Design Description (SSDD). Also included in the SSDD information shall be a discussion on how modules will be re-used when new software is added, percentage of re-usable code, COTS code to be used, restrictions, warranties, licensing, unit testing, etc.

#### **3.1.1.3 ACCESS FOR REVIEW.**

The Contractor shall provide the Government or its authorized representative access to facilities, including the software engineering and test environments, for review of software products and activities required by the contract.

The Contractor shall provide accounts on appropriate Contractor computer systems for all Integrated Project Team (IPT) members.

### **3.1.2 REQUIREMENTS COLLECTION AND MANAGEMENT.**

#### **3.1.2.1 SYSTEM REQUIREMENTS.**

The Contractor shall provide information for the purpose of defining and recording the requirements to be met by the system and the methods to be used to ensure that each requirement has been met. The Contractor shall provide information for all applicable items in the System/Subsystem Specification (SSS) DID number DI-IPSC-81431 (CDRL A003) and the Interface Requirements Specification (IRS) DID number DI-IPSC-81434 (CDRL A004).

The Contractor shall provide software impact data for hardware configuration decisions.

The Contractor shall provide information for the purpose of defining and recording the software requirements to be met by each CSCI, the methods to be used to ensure that each requirement has been met, and the traceability between the CSCI requirements and system requirements. The Contractor shall provide information for all applicable items in the Software Requirements Specification (SRS) DID number DI-IPSC-81433 (CDRL A005).

#### **3.1.2.2 INTERFACE REQUIREMENTS.**

The Contractor shall evaluate existing interfaces and develop documentation on data flow, data content management, and



other issues described in the IRS DID number DI-IPSC-81434 (CDRL A004).

### **3.1.2.3 HUMAN INTERFACE REQUIREMENTS.**

The Contractor shall demonstrate the proposed interface by means of an interactive prototype. This prototyped interface shall be maintained throughout the life of the development effort. The Contractor may supplement the prototype with storyboards. The Contractor shall document this interface with a Software Users Manual (SUM) in accordance with DID number DI-IPSC-81443 (CDRL A006).

The Contractor shall identify and record information needed by hands-on users of the software (persons who will both operate the software and make use of its results) in the SUM (CDRL A006).

### **3.1.2.4 REQUIREMENTS MANAGEMENT.**

The Contractor shall evaluate requirements' impacts due to changes in design, hardware configuration, or project resources.

### **3.1.3 SOFTWARE DESIGN.**

#### **3.1.3.1 SOFTWARE ARCHITECTURE AND SYSTEM WIDE DESIGN.**

The Contractor shall provide information for the purpose of defining the design of the software and providing information for all applicable items of the SSDD in accordance with DID number DI-IPSC-81432 (CDRL A002). In accordance with CDRL A002, the Contractor shall provide a document on the proposed architecture, which details process relationships, internal and external interfaces, and process execution descriptions. Also as a portion of CDRL A002, the contractor shall propose how code re-use and the use of COTS software shall be maximized, and shall provide the Government detailed descriptions of each module to be re-used.

#### **3.1.3.2 DETAILED DESIGN.**

The Contractor shall define and record the CSCI-wide design decisions, architectural design of each CSCI and the traceability between the software units and the CSCI requirements, and a description of each software unit. The result shall include all applicable items in the Software Design Description (SDD) DID number DI-IPSC-81435 (CDRL A007). If case tools are used to generate the SDD, the Contractor shall ensure that the automation linkage between the design documentation and the code is preserved so that changes to either can be incorporated in the other by using the case tools.

### **3.1.4 SOFTWARE TESTING.**

#### **3.1.4.1 SOFTWARE TEST PLANNING.**

The Contractor shall provide information for the purpose of developing and recording plans for conducting COTS and re-used module, acceptance and system qualification testing. The Contractor shall provide this information in accordance with DID number DI-IPSC-81438 (CDRL A008) for all applicable items in the Software Test Plan. Once approved, the Contractor shall perform all software testing tasks in accordance with the approved plan or approach.

#### **3.1.4.2 COTS AND RE-USED MODULE TESTING.**

The Contractor shall perform COTS and re-used module testing. The requirements to be met include:

- a. Preparing for COTS and re-used module testing,
- b. Performing COTS and re-used module testing,
- c. Revision and re-testing,
- d. Analyzing and recording test results.

The Contractor shall develop and record the test preparations, test cases, and test procedures to be used for COTS and re-used module testing. The result shall include all applicable items in the Software Test Description (STD) DID number DI-IPSC-81439 (CDRL A009). The results of COTS and re-used module testing shall include all applicable items in the Software Test Report (STR) DID number DI-IPSC-81440 (CDRL A010).

For deliverable software, the Contractor shall acquire approval for the programming language to be used.

#### **3.1.4.3 ACCEPTANCE TESTING.**

The Contractor shall conduct acceptance testing. The purpose of the acceptance testing is to verify/validate the proposed Release baseline prior to system qualification testing. The requirements to be met include the requirements for:

- a. Testing on the Government computer system,
- b. Preparing for acceptance testing,
- c. Dry run of acceptance testing,
- d. Performing acceptance testing,
- e. Revision and re-testing,
- f. Analyzing and recording acceptance test results.

The Contractor shall provide information for the purpose of developing and recording the test preparations, test cases, and test procedures to be used for acceptance testing and the traceability between the test cases and the CSCI requirements. The Contractor shall provide information for all applicable items in the Software Test Description (STD) DID number DI-IPSC-81439 (CDRL A011). The Contractor shall prepare the test data needed to carry out the test cases. The acceptance test of each proposed Release baseline shall be performed at the Government location. The Contractor shall provide acceptance test information for all applicable items in the Software Test Report (STR) DID number DI-IPSC-81440 (CDRL A012).

#### **3.1.4.4 SYSTEM QUALIFICATION TESTING.**

The Contractor shall conduct system qualification testing using MIL-STD-498 requirements as guidance for:

- a. Independence in system qualification testing,
- b. Testing on the target computer system,
- c. Preparing for system qualification testing,
- d. Dry run of system qualification testing,
- e. Performing system qualification testing,
- f. Revision and re-testing,
- g. Analyzing and recording system qualification test results.

The Contractor shall provide information for the purpose of developing and recording the test preparations, test cases, and test procedures to be used for system qualification testing and the traceability between the test cases and the system requirements. For software systems, the Contractor shall provide information for all applicable items in the Software Test Description (STD) DID number DI-IPSC-81439 (CDRL A011). The Contractor shall prepare the test data needed to carry out the test cases and provide the Government advance notice of the time and location of system qualification testing.

The Contractor shall analyze and record the results of system qualification testing. For software systems, the Contractor shall provide information for all applicable items in the Software Test Report (STR) DID number DI-IPSC-81440 (CDRL A012).

#### **3.1.5 PREPARING SOFTWARE FOR TRANSITION.**

The Contractor shall identify the hardware, software, and other resources needed for life cycle support of deliverable software and describe the Contractor's plans for transitioning deliverable items to the Government in a Software Transition Plan (STrP) which includes all applicable items from DID number DI-IPSC-81429 (CDRL A013).

Once approved by the Government, the Contractor shall perform all software transition tasks in accordance with the

approved plan or approach.

For each proposed Release baseline, the Contractor shall deliver, in accordance with the Software Transition Plan, the executable and source files, including any batch files, command files, data files, or other software files needed to regenerate, install, and operate the executable software, to the Government. The result shall include all applicable items in the executable and source file sections of the Software Product Specification (SPS) DID number DI-IPSC-81441 (CDRL A014).

The Contractor shall update the design description of each CSCI to match the "as built" software and shall define and record:

- a. The methods to be used to verify copies of the software,
- b. The measured computer hardware resource utilization for the CSCI,
- c. Other information needed to support the software,
- d. Traceability between the CSCI's source files and software units and between the computer hardware resource utilization measurements and the CSCI requirements concerning them.

The result shall include all applicable items in the qualification, software support, and traceability sections of the Software Product Specification (SPS) DID number DI-IPSC-81441 (CDRL A014).

The Contractor shall identify and record the exact version of software prepared for each Release baseline. The information shall include all applicable items in the Software Version Description (SVD) DID number DI-IPSC-81442 (CDRL A015).

The Contractor shall perform the following tasks to transition the first proposed Release Baseline to the Government:

- a. Install and check out the deliverable software in the Government support environment,
- b. Demonstrate to the Government that the deliverable software can be regenerated (compiled/linked/loaded into an executable product) and maintained using commercially available, Government-owned, or contractually deliverable software and hardware designated in the contract or approved by the Government,
- c. Provide necessary support training to the Government in areas such as product regeneration, coding standards, and software execution.

### **3.1.6 SOFTWARE CONFIGURATION MANAGEMENT.**

The Contractor shall develop, manage, and administer a Configuration Management (CM) system that will ensure effective:

- a. Configuration Identification,
- b. Configuration Change Control,
- c. Configuration Status Accounting (CSA),
- d. Audits (acceptance tests) of the total configurations.

#### **3.1.6.1 CONFIGURATION IDENTIFICATION.**

The Contractor shall provide information in accordance with Data Item Description DI-IPSC-81427 (CDRL A001) for identifying the entities to be placed under configuration control, and shall assign a project-unique identifier to each CSCI and each additional entity to be placed under configuration control. These entities shall include the software products to be developed or used under the contract and the elements of the software development environment. The identification scheme shall be at the level at which entities will actually be controlled, for example, computer files, electronic media, documents, software units, and configuration items. The identification scheme shall include the version/revision/release status of each entity.

#### **3.1.6.2 CONFIGURATION CONTROL.**

The Contractor shall establish and implement:

1. Procedures designating the levels of control each identified entity must pass through (for example, author control, project-level control, Government control);
2. The persons or groups with authority to authorize changes and to make changes at each level (for example, the programmer/analyst, the software lead, the project manager, the Government);
3. The steps to be followed to request authorization for changes, process change requests, track changes, distribute changes, and maintain past versions.

Changes that affect an entity already under Government control shall be proposed to the Government in accordance with contractually established forms and procedures.

#### **3.1.6.2.1 RELEASE BASELINE.**

During the development/manufacture of the software, the Contractor shall independently modify/maintain the Developmental baseline as needed to maintain viable configuration identification/control. Except for contractually required deliverables that require Government approval, the Contractor shall retain change approval authority for the software changes until establishment of the first Release Baseline. The first Release Baseline shall satisfy all the initial system software requirements as defined in paragraph 3.2.1. Follow on Release Baselines shall contain Government approved modifications to the baseline, which are being proposed for formal system qualification. The Government will retain approval authority for all Government specifications cited in this contract.

Using Contractor provided information (CDRL A011), the Government will perform an acceptance test on each proposed Release Baseline. Establishment of a validated/verified Release Baseline will take place upon resolution, to Government satisfaction, of any discrepancies identified during the test.

Formal system demonstrations/exercises shall utilize only approved Release Baselines.

#### **3.1.6.2.2 CONFIGURATION CHANGE CONTROL.**

The Contractor shall record and track all problems or enhancements identified for the MSC/T software. The information to be recorded and tracked shall include but not be limited to the following:

- a. Name of person (originator) identifying the problem,
- b. Originator phone number and organization,
- c. Date identified,
- d. System affected,
- e. Associated CSCI,
- f. CSCI version,
- g. Site,
- h. Documents affected,
- i. Problem duplicability,
- j. Problem description,
- k. Possible workarounds,
- l. Proposed solution,
- m. Estimated workhours for correction, and
- n. Files affected.

The Contractor shall develop and submit to the government for approval a Problem Change Report (CDRL A016) containing the recorded data when problems or enhancements in/to a configuration item are identified after validation/verification and approval of the first Release Baseline. After validation/verification and approval of the first Release Baseline, the Contractor shall correct PCRs as tasked by Delivery Orders.

#### **3.1.6.3 CONFIGURATION STATUS ACCOUNTING.**

The Contractor shall record and maintain information including but not limited to the following: product identification, product traceability information, as-built/as delivered configuration, changes to the baseline, and proposed effectiveness and

status of implementation of Government approved changes to the baseline.

This information shall be provided to the Government (CDRL A017).

#### **3.1.6.4 PACKAGING, STORAGE, HANDLING, AND DELIVERY.**

The Contractor shall provide information for the establishment and implementation of procedures (in the Software Transition Plan) for the packaging, storage, handling, and delivery of deliverable software products (CDRL A013). The Contractor shall maintain master copies of delivered software products for the duration of the contract.

#### **3.1.7 PRODUCT EVALUATIONS.**

The Contractor shall perform in-process evaluations of the software products and a final evaluation of each deliverable software product before its delivery. The software products to be evaluated, criteria to be used, and definitions for those criteria are given in Appendix D of MIL-STD-498.

The Contractor shall prepare and maintain records of each software product evaluation. These records shall be maintained for the life of the contract.

The persons responsible for evaluating a software product shall not be the persons who developed the product.

#### **3.1.8 SOFTWARE QUALITY ASSURANCE.**

The Contractor shall conduct on-going evaluations of software development activities and the resulting software products to assure that:

- a. Each activity required by the contract or described in the software development plan is being performed in accordance with the contract and with the software development plan,
- b. Each required software product exists and has undergone software product evaluations, testing, and corrective action where necessary.

The Contractor shall prepare and maintain records of each software quality assurance activity. These records shall be maintained for the life of the contract.

The persons responsible for conducting software quality assurance evaluations shall not be the persons who developed the software product, performed the activity, or are responsible for the software product or activity. The persons responsible for assuring compliance with the contract shall have the resources, responsibility, authority, and organizational freedom to permit objective software quality assurance evaluations and to initiate and verify corrective actions.

#### **3.1.9 CORRECTIVE ACTION.**

The contractor shall implement a corrective action system for handling each problem detected in software products under project-level or higher configuration control and each problem in activities required by the contract or described in the software development plan. The system shall meet the following requirements:

- a. Inputs to the system shall consist of problem/change reports,
- b. The system shall be closed-loop, ensuring that all detected problems are promptly reported and entered into the system, action is initiated on them, resolution is achieved, status is tracked, and records of the problems are maintained for the life of the contract,
- c. Each problem shall be classified by category and priority, using the categories and priorities in Appendix C of Mil-Std-498,
- d. Analysis shall be performed to detect trends in the problems reported,
- e. Corrective actions shall be evaluated to determine whether problems have been resolved, adverse trends have been reversed, and changes have been correctly implemented without introducing additional problems.

### **3.1.10 CONTRACTOR AND GOVERNMENT INTERACTION.**

#### **3.1.10.1 INTEGRATED PROJECT TEAM.**

An Integrated Project Team (IPT) composed of appropriate engineering disciplines, specialties and business functions from the Government and Contractor shall be established. The objective of the team shall be to efficiently and effectively coordinate the interaction between the Contractor and the Government. A formal Integrated Project Team charter shall be developed and approved 30 days after contract award. Nothing in the teaming process shall relieve the Contractor of the responsibility to meet the contract requirements.

The IPT Charter will define the responsibilities of the IPT including the technical reviews to take place and the requirements for the reviews. The Contractor shall provide necessary program plan information in accordance with CDRL A018 for the development and maintenance of the IPT Charter.

#### **3.1.10.2 IN PROCESS REVIEWS.**

The Contractor shall plan and provide qualified technical, engineering, and/or management personnel to attend In Process Reviews (IPRs) associated with the USMC CEC project. These reviews shall be attended by persons with authority to make cost and schedule decisions and shall have the following objectives:

- a. Keep management informed about project status, directions being taken, technical agreements reached, and overall status of evolving software products,
- b. Resolve issues that could not be resolved by the IPT,
- c. Arrive at agreed-upon mitigation strategies for near- and long-term risks that could not be resolved by the IPT,
- d. Identify and resolve management-level issues and risks not raised by the IPT,
- e. Obtain commitments and Government approvals needed for timely accomplishment of the project.

Examples of some possible reviews are identified in Appendix E of Mil-Std-498.

The Contractor shall detail Contractor activities during the reporting month and plans for the following one month. Monthly status reports (CDRL A019) shall be submitted to the Government and shall include the following information:

- a. A summary of work performed and results obtained, manpower expended and expenses incurred (to include a comparison of planned versus actual for labor hour and funding utilization and an explanation for any deviations or labor hour adjustments),
- b. Current or projected problems, issues and risks,
- c. A description/plan and schedule for work to be performed during the subsequent month,
- d. An explanation for any deviations from previous month's projections, and
- e. Any recommendations relating to the effort.

Manpower expended to re-accomplish tasks or deliverables following initial failure by the Contractor to include Government comments will be specifically identified and explained. All authorized demonstrations (being those demonstrations authorized by delivery orders) given during the subject period of the report will summarize the demonstration, specify who witnessed the demonstration and any reactions thereto and make recommendations for any follow-on activities.

#### **3.1.11 RISK MANAGEMENT.**

The Contractor shall provide information for the purpose of identifying and assessing risks, and contingency planning. The Contractor shall include all risk management information in the Software Development Plan (CDRL A001) which shall be kept current with each delivery order.

#### **3.1.12 SOFTWARE MANAGEMENT INDICATORS.**

The Contractor shall use software management indicators to aid in managing the software development process and

communicating its status to the Government. The Contractor shall identify and define a set of software management indicators, including the data to be collected, the methods to be used to interpret and apply the data, and the planned reporting mechanism. The Contractor shall record this information in the software development plan (CDRL A001) and shall collect, interpret, apply, and report on those indicators as described in the plan. Candidate indicators are given in Appendix F of Mil-Std-498.

### **3.1.13 SECURITY AND PRIVACY.**

The Contractor shall provide facilities to securely store all software and hardware developed and documentation created and received.

The Contractor shall ensure the operational software has provisions such as passwords and firewalls for protection against unauthorized access.

### **3.1.14 SUBCONTRACTOR MANAGEMENT.**

Subcontractors may be utilized if necessary. If subcontractors are used, the Contractor shall include in subcontracts all contractual requirements necessary to ensure that software products are developed in accordance with prime contract requirements.

## **3.2 TECHNICAL REQUIREMENTS.**

The following technical requirements are broken into two sections. The first section contains the initial system software requirements. The software developed to meet these requirements shall be transitioned to the Government per delivery order as the first Release Baseline. The additional requirements will be initiated by separate delivery orders and shall constitute follow on Release Baselines.

### **3.2.1 INITIAL SYSTEM SOFTWARE REQUIREMENTS.**

If other than the MSC/T Software Suite is proposed to be delivered to meet the USMC CEC requirements, the software shall meet the requirements satisfied by the MSC/T Software Suite baseline demonstrated on September 16, 1997 at the Eglin Air Force Base Cruise Missile Intercept Demonstration.

The MSC/T Software Suite successfully demonstrated the ability to correlate high-fidelity real time local air track information, provided by the Navy Cooperative Engagement Capability (CEC) System, with remote real-time air track sources, such as those available from TADIL-J. The correlated information was stored in a common tactical database, which provided engagement status, communications status, and the central track database, containing object oriented track representation as well as hierarchical composite track representation. The correlated picture of the battlespace was displayed via the Tactical Display Framework (TDF) for use by command and control elements for the purpose of situation awareness and for sensor cueing and firing ordnance. The targeting information was provided to remote surface-to-air missile systems (Army-HMRAAM) and USMC Avenger, which engage simulated cruise missiles.

The MSC/T Software Suite operates under UNIX Solaris SunOS 5.5.1 operating system and can be portable to POSIX standard compliant Unix and Windows NT. MSC/T was developed in the ANSI C++ programming language with less than 100k single lines of code.

The MSC/T Software Suite server runs on a sparc station with a UNIX operating system. The tactical stations runs on any platform capable of running standard JAVA applications.

The visualization system sends its display information over an Internet-style interface to the client workstations using JAVA applets.

The server and client software is structured in such a way so that code can be added to synthesize and display tactical information from additional sensors without affecting the original performance of the system. The architecture is open enough to allow integration with code from other systems and porting to new platforms. The server software is written in such a way that the server processes can be distributed among several platforms without affecting the original performance.

The MSC/T provides real-time analysis of system and sensor performance.

The Tactical Display Framework (TDF) used at the Eglin Air Force Base Cruise Missile Intercept Demonstration is proprietary software owned by Solipsys Corporation and can not be included as Government Furnished Information (GFI).

### **3.2.2 ADDITIONAL SOFTWARE DEVELOPMENT REQUIREMENTS.**

The following requirements shall be initiated by separate delivery orders.

#### **3.2.2.1 EVALUATION OF ACCEPTING/DISPLAYING ADDITIONAL INPUTS.**

The Contractor shall as specified by delivery order evaluate and submit reports (CDRL A020) on the need and capability of accepting/displaying additional interfaces. The evaluation or study shall identify the following system impacts:

- a. Benefits and detriments of adding the interface,
- b. Requirements for the new interface - Tactical interfaces are described in technical documentation that describes how the information is to be used by the system. The evaluation needs to interpret how these "usage" requirements are to be applied to the existing system;
- c. New hardware - Any hardware added should not cause any impact on the platform's operating system. The hardware should work with any software or hardware upgrades to the computer platform. The hardware should have minimal impact to the Defense Information Infrastructure Common Operating Environment (DII COE) segments which have been implemented;
- d. Software architecture changes - The evaluation will need to describe how the implementation described in the requirements will change the existing system architecture. Changes to be determined would include database restructuring, new processes, re-allocation of processes between platforms, modification of the base library modules, and changes to other interfaces;
- e. New synthesis techniques and/or correlation algorithms - The evaluation will need to describe how the new tactical information will be combined with tactical information from the existing interfaces;
- f. Operator impacts - The evaluation will need to describe, through SUM updates and an interactive prototype, how the visualization system will be modified to accommodate the new tactical information that will be received from this interface.

The following are some known agencies/command elements for which additional interface evaluation may be requested:

- a. Advanced Field Artillery Tactical Data System (AFATDS),
- b. Joint Surveillance and Target Attack Radar System (JSTARS),
- c. RIVET JOINT,
- d. Situational Awareness Beacon with Replay (SABRE+),
- e. Patriot,
- f. Airborne Warning and Control System (AWACS),
- g. Force Battlefield Tactical Operations Center (BTOC).

#### **3.2.2.2 ADD ADDITIONAL INTERFACES TO TACTICAL SYSTEMS.**

The Contractor shall incorporate additional interfaces with a variety of other systems to both acquire and provide information. This will require the flexibility to subcontract with developers of these other systems to provide the necessary technical support and expertise to develop and test the required interfaces. These interfaces shall entail network and point-to-point interfaces as well as middleware to provide format translation, buffering, access control and a variety of other services to minimally impact legacy systems.

The Contractor shall as specified by delivery order modify MSC/T to accept and display and integrate inputs from the following agencies and others that may be required:

- a. Contingency Theater Automated Planning System (CTAPS),



- b. Intelligence Analysis Systems (IAS),
- c. Tactical Combat Operations (TCO),
- d. Theater Battle Management Core Systems (TBMCS).

### **3.2.2.3 INTEGRATE RADAR SYSTEMS INTO USMC CEC SYSTEM SOFTWARE.**

The Contractor shall as specified by delivery order integrate radar systems such as the Continuous Wave Acquisition Radar (CWAR) and High Power Illuminator (HPI) into the USMC shore based CEC system MSC/T software suite.

Phase I of this effort shall be:

- a. Collect the data required to build a data generator;
- b. Build the data generator;
- c. Develop the Interface Design Documents (IDDs) (CDRL A021) and the Interface Requirements Specifications (IRSSs) (CDRL A004).

Phase II of this effort shall be:

- a. Write the tracker for each radar;
- b. Integrate each tracker into the MSC/T
- c. Perform testing required to have each tracker certified.

### **3.2.2.4 ADDING NEW CORRELATION ALGORITHMS SYNTHESIS TECHNIQUES.**

The Contractor shall as specified by delivery order modify the MSC/T software to accomplish correlation of the “real time” (raw CEC) data with the “near real time” (data link) data. The outcome of this modification will be the display of a single coherent track, which corresponds to the single unique target identified by each data source.

### **3.2.2.5 3-D DISPLAY SOFTWARE.**

The Contractor shall as specified by delivery order develop a 3 dimensional version of the CEC “large screen” display software. The Contractor shall integrate this 3-D display software with both the new “large screen” projector/screen system and the individual workstations.

### **3.2.2.6 ON-SITE TEST/DEMONSTRATION SUPPORT.**

The Contractor shall as specified by delivery order provide on-site technical support to field tests and demonstrations during the contract period. Technical support will consist of setting up, operating, breaking down and filing problems with the demonstration system.

### **3.2.2.7 INCORPORATE MODIFICATIONS/UPGRADES TO EXISTING TACTICAL INTERFACES.**

System modifications shall be performed to incorporate changes in sensor specifications. The specifications that describe the protocol format and use of tactical interfaces are constantly undergoing revisions. There is a need to keep the system up to date with these changes.

### **3.2.2.8 PORTING TO NEW PLATFORMS.**

The system may need to be ported to a new computer platform as the technology improves. The services required by this task would be:

- a. An evaluation that determines the impact of the new hardware;
- b. A transition plan that describes how the system software will be ported to the new hardware without affecting the performance of any systems that still have the old hardware;

- c. Code changes;
- d. Testing;
- e. Exercises/Demonstrations.

### **3.2.2.9 TRANSITION TO DII COE COMPLIANCE.**

Transition to DII COE compliance shall transform the system to a DII COE compliant system and maintain interoperability with the DII COE segments. The following services shall be necessary:

- a. Incorporate the DII COE segments - An evaluation shall be performed to determine the usefulness of the segment and the changes to be incorporated into the software. Compliance shall then be demonstrated.
- b. Transform system software into DII COE segments - The system software can be split into segments, which will run with the DII COE.
- c. Integrate software with the latest DII COE build - The software will need to be modified as new DII COE builds and requirements are published.

### **3.2.2.10 RESTRUCTURE SOFTWARE TO UPGRADED TECHNOLOGY.**

The Contractor shall restructure software to upgraded technology as directed per delivery order by the Government. All proposed improvements, including both Government ordered and Contractor proposed upgrades, shall be reviewed by the Government and shall require Government approval for implementation. The technology involved with software is evolving at a rapid pace. It is a given that the more the system software takes advantage of these technologies, the longer it will keep its usefulness. The intent is not to blindly adopt every new fad that gets promoted in industry. Instead this requirement is included to ensure that the core of the system software keeps up with technological advances without committing the system to a solution that limits future expansions and makes long-term life-cycle support prohibitively expensive. Some upgrade possibilities include:

- a. Setting up the system with two servers - A UNIX server which will support the tactical software, and a Microsoft NT server which will serve office applications. Included in this would be a strategy to allow information sharing between the two servers.
- b. Further improvements in World Wide Web technology such as new versions of JAVA or other tools,
- c. Adoption of a standard architecture such as the Common Object Request Broker Architecture (CORBA) which will allow more COTS to be incorporated.
- d. Incorporation of COTS software such as databases and web servers which will add capability at a reduced cost.

### **3.2.2.11 PROVIDE ON-LINE DIAGNOSTICS AND LOGISTICS.**

The purpose of on-line diagnostics and logistics is to provide all technical and logistical information in an on-line format so that the production version of the system is delivered with all the logistical support installed. This support includes:

- a. Point and Click diagnostics, which will detect system problems and isolate them down to the Line Replaceable Unit (LRU).
- b. Interactive-Electronic Technical Manuals (IETM) which will be integrated with the diagnostic tools so that when a problem is detected the information concerning the problem is readily available. The manuals will be developed in an open format such as the Standard Generalized Markup Language (SGML) so that long-term support of the technical manuals will remain cost effective.
- c. Training information such as technical documents explaining correlation algorithms concepts, an on-line Software User's Manual (SUM), Videos explaining operational concepts and diagnostic techniques, and scenarios that exercise the equipment so that operators can practice.
- d. A web site that provides support to the fielded units. This support would include a means of downloading packages, a repository for system documentation, and a means for logging questions, service requests, and observed problems.

### **3.2.2.12 UTILIZE A LOCAL AREA NETWORK CONFIGURATION.**

The system shall be set up in a Local Area Network (LAN) configuration. The system should not be limited to operations

with a single unit. Instead, the servers of the system should be able to relay information to remote workstations.

### **3.2.2.13 CONNECT THE SYSTEM TO THE SECURE INTERNET PROTOCOL NETWORK (SIPR).**

Connecting the system to the Secure Internet Protocol Network (SIPR) will allow the servers of the systems to serve remote connections to the SIPR net. The workstation software will need to run on a variety of platforms used by the SIPR community.

### **3.2.2.14 ESTABLISH LIAISON WITH OTHER SERVICE BRANCHES FOR SHORE-BASED CEC CONCEPT.**

The Contractor shall as specified by delivery order develop test plans, perform liaison with test sites and with participating units/activities, report results, establish liaison with other service branches/enlist support of other service branches for implementing joint interoperability of USMC shore –based CEC with other service branches.

### **3.2.2.15 TECHNICAL BRIEFING.**

The Contractor shall support the technical briefing of the USMC CEC to Government personnel and organizations. The briefing efforts shall require the development of briefing literature (CDRL A022), attendance at briefings and industry events, and the creation of audio-visual material (CDRL A022) which may be used by potential users for the evaluation of USMC CEC concepts.

## **4 GOVERNMENT FURNISHED ITEMS.**

Government furnished Material, Information, and Equipment will be furnished with each DO as needed. All GFE shall be returned in as good condition as when received, except for reasonable wear and tear determined by the Government. The Contractor assumes all risk of and responsibility for loss, destruction, or damage to the GFE it accepts. The Contractor shall confirm receipt of GFE in the monthly status report (CDRL A019). Any loss, destruction, or damage shall be investigated and reported on the applicable status report. All GFE and GFI shall be returned at the conclusion or termination of the delivery order.

## **5 PERIOD OF PERFORMANCE.**

Contract period of performance is 2 years from the effective date of contract, but may be extended up to 3 additional years via exercise of options.

### **DATA DELIVERABLES.**

<u>SOW PARA</u>	<u>DATA DESCRIPTION</u>	<u>SEQUENCE NO.</u>	<u>DID NO.</u>
3.1 3.1.1 3.1.1.2 3.1.6.1 3.1.9 3.1.11 3.1.12	Software Development Plan (SDP)	A001	DI-IPSC-81427
3.1.1.2 3.1.3.1	System/Subsystem Design Description (SSDD) Info	A002	DI-IPSC-81432
3.1.2.1	System/Subsystem Specification (SSS) Info	A003	DI-IPSC-81431

3.1.2.1	Integrated Requirements Specification	A004	DI-IPSC-81434
3.1.2.2	(IRS) Info		
3.1.2.1	Software Requirements Specification	A005	DI-IPSC-81433
	(SRS) Info		
3.1.2.3	Software Users Manual (SUM)	A006	DI-IPSC-81443
3.1.3.2	Software Design Description (SDD)	A007	DI-IPSC-81435
3.1.4.1	Software Test Plan (STP) Info	A008	DI-IPSC-81438
3.1.4.2	Software Test Description (STD)	A009	DI-IPSC-81439
3.1.4.2	Software Test Report (STR)	A010	DI-IPSC-81440
3.1.4.3	Software Test Description (STD) Info	A011	DI-IPSC-81439
3.1.4.4			
3.1.6.2.1			
3.1.4.3	Software Test Report (STR) Info	A012	DI-IPSC-81440
3.1.4.4			
3.1.5	Software Transition Plan (STrP)	A013	DI-IPSC-81429
3.1.6.4			
3.1.5	Software Product Specification (SPS)	A014	DI-IPSC-81441
3.1.5	Software Version Description (SVD)	A015	DI-IPSC-81442
3.1.6.2.2	Technical Report - Study/Services	A016	DI-MISC-80508
3.1.6.3	Product/Asset Configuration Data	A017	DI-CMAN-81553
	Information Packet		
3.1.10.1	Program Plan	A018	DI-MGMT-80909
3.1.10.2	Status Report	A019	DI-MGMT-80368
3.2.2.1	Scientific and Technical Report	A020	DI-MISC-80711
3.2.2.3	Interface Design Document (IDD)	A021	DI-IPSC-81436
3.2.2.15	Presentation Material	A022	DI-ADMN-81373

#### ITEMS 0001 through 0004 - DATA REQUIREMENTS (NAVSEA) (SEP 1992)

The data to be furnished hereunder shall be prepared in accordance with the Contract Data Requirements List, DD Form 1423, Exhibit(s), attached hereto.

#### CONTRACTOR'S PROPOSAL (NAVSEA) (SEP 1990) (Note: Fill-ins to be completed at time of award)

(a) Performance of this contract by the Contractor shall be conducted and performed in accordance with detailed obligations to which the Contractor committed itself in Proposal \_\_\_\_\_ dated \_\_\_\_\_ in response to NSW Crane

Solicitation No. N00164-98-R-0027.

(b) The technical volume(s) of the Contractor's proposal is incorporated by reference and hereby made subject to the provisions of the "ORDER OF PRECEDENCE" (FAR 52.215-33) clause of this contract. Under the "ORDER OF PRECEDENCE" clause, the technical volume of the Contractor's proposal referenced herein is hereby designated as item (f) of the clause, following "the specifications" in the order of precedence.

#### **INFORMATION AND DATA FURNISHED BY THE GOVERNMENT - ALTERNATE II (NAVSEA) (MAY 1993)**

(a) NAVSEA Form 4340/2 or Schedule C, as applicable, Government Furnished Information, attached hereto, incorporates by listing or specific reference all the data or information which the Government has provided or will provide to the Contractor except for -

(1) The specifications set forth in Section C, and

(2) Government specifications, including drawings and other Government technical documentation which are referenced directly or indirectly in the specifications set forth in Section C and which are applicable to this contract as specifications, and which are generally available and provided to Contractors or prospective Contractors upon proper request, such as Federal or Military Specifications, and Standard Drawings, etc.

(b) Except for the specifications referred to in subparagraphs (a)(1) and (2) above, the Government will not be obligated to provide to the Contractor any specification, drawing, technical documentation or other publication which is not listed or specifically referenced in NAVSEA Form 4340/2 or Schedule C, as applicable, notwithstanding anything to the contrary in the specifications, the publications listed or specifically referenced in NAVSEA Form 4340/2 or Schedule C, as applicable, the clause entitled "GOVERNMENT PROPERTY (FIXED-PRICE CONTRACTS)" (FAR 52.245-2), or "GOVERNMENT PROPERTY (COST-REIMBURSEMENT, TIME-AND-MATERIAL, OR LABOR-HOUR CONTRACTS)" (FAR 52.245-5), as applicable, or any other term or condition of this contract.

(c)(1) The Contracting Officer may at any time by written order:

(i) delete, supersede, or revise, in whole or in part, data listed or specifically referenced in NAVSEA Form 4340/2 or Schedule C, as applicable; or

(ii) add items of data or information to NAVSEA Form 4340/2 or Schedule C, as applicable; or

(iii) establish or revise due dates for items of data information in NAVSEA Form 4340/2 or Schedule C, as applicable.

(2) If any action taken by the Contracting Officer pursuant to subparagraph (c)(1) immediately above causes an increase or decrease in the costs of; or the time required for performance of any part of the work under this contract an equitable adjustment shall be made in the contract amount and delivery schedule in accordance with the procedures provided for in the "CHANGES" clause of this contract.

#### **ORGANIZATIONAL CONFLICT OF INTEREST (NAVSEA) (NOV 1996)**

(a) "Organizational Conflict of Interest" means that because of other activities or relationships with other persons, a person is unable or potentially unable to render impartial assistance or advice to the Government, or the person's objectivity in performing the contract work is or might be otherwise impaired, or a person has an unfair competitive advantage. "Person" as used herein includes Corporations, Partnerships, Joint Ventures, and other business enterprises.

(b) The Contractor warrants that to the best of its knowledge and belief, and except as otherwise set forth in the contract, the Contractor does not have any organizational conflict of interest(s) as defined in paragraph (a).

(c) It is recognized that the effort to be performed by the Contractor under this contract may create a potential organizational conflict of interest on the instant contract or on a future acquisition. In order to avoid this potential conflict of interest, and at the same time to avoid prejudicing the best interest of the Government, the right of the Contractor to participate in future procurement of equipment and/or services that are the subject of any work under this contract shall be limited as described below in accordance with the requirements of FAR 9.5.

(d)(1) The Contractor agrees that it shall not release, disclose, or use in any way that would permit or result in disclosure to any party outside the Government any information provided to the Contractor by the Government during or as a result of performance of this contract. Such information includes, but is not limited to, information submitted to the Government on a confidential basis by other persons. Further, the prohibition against release of Government provided information extends to cover such information whether or not in its original form, e.g., where the information has been included in Contractor generated work or where it is discernible from materials incorporating or based upon such information. This prohibition shall not expire after a given period of time.

(2) The Contractor agrees that it shall not release, disclose, or use in any way that would permit or result in disclosure to any party outside the Government any information generated or derived during or as a result of performance of

this contract. This prohibition shall expire after a period of three years after completion of performance of this contract.

(3) The prohibitions contained in subparagraphs (d)(1) and (d)(2) shall apply with equal force to any affiliate of the Contractor, any subcontractor, consultant, or employee of the Contractor, any joint venture involving the Contractor, any entity into or with which it may merge or affiliate, or any successor or assign of the Contractor. The terms of paragraph (e) of this Special Contract Requirement relating to notification shall apply to any release of information in contravention of this paragraph (d).

(f) The Contractor further agrees that, during the performance of this contract and for a period of three years after completion of performance of this contract, the Contractor, any affiliate of the Contractor, any subcontractor, consultant, or employee of the Contractor, any joint venture involving the Contractor, any entity into or with which it may subsequently merge or affiliate, or any other successor or assign of the Contractor, shall not furnish to the United States Government, either as a prime contractor or as a subcontractor, or as a consultant to a prime contractor or subcontractor, any system, component or services which is the subject of the work to be performed under this contract. This exclusion does not apply to any recompetition for those systems, components or services furnished pursuant to this contract. As provided in FAR 9.505-2, if the Government procures the system, component, or services on the basis of work statements growing out of the effort performed under this contract, from a source other than the contractor, subcontractor, affiliate, or assign of either, during the course of performance of this contract or before the three year period following completion of this contract has lapsed, the Contractor may, with the authorization of the cognizant Contracting Officer, participate in a subsequent procurement for the same system, component, or service. In other words, the Contractor may be authorized to compete for procurement(s) for systems, components or services subsequent to an intervening procurement.

(g) The Contractor agrees that, if after award, it discovers an actual or potential organizational conflict of interest, it shall make immediate and full disclosure in writing to the Contracting Officer. The notification shall include a description of the actual or potential organizational conflict of interest, a description of the action which the Contractor has taken or proposes to take to avoid, mitigate, or neutralize the conflict, and any other relevant information that would assist the Contracting Officer in making a determination on this matter. Notwithstanding this notification, the Government may terminate the contract for the convenience of the Government if determined to be in the best interest of the Government.

(h) Notwithstanding paragraph (f) above, if the Contractor was aware, or should have been aware, of an organizational conflict of interest prior to the award of this contract or becomes, or should become, aware of an organizational conflict of interest after award of this contract and does not make an immediate and full disclosure in writing to the Contracting Officer, the Government may terminate this contract for default.

(i) If the Contractor takes any action prohibited by this requirement or fails to take action required by this requirement, the Government may terminate this contract for default.

(j) The Contracting Officer's decision as to the existence or nonexistence of an actual or potential organizational conflict of interest shall be final and is not subject to the clause of this contract entitled "DISPUTES" (FAR 52.233-1).

(k) Nothing in this requirement is intended to prohibit or preclude the Contractor from marketing or selling to the United States Government its product lines in existence on the effective date of this contract; nor, shall this requirement preclude the Contractor from participating in any research and development or delivering any design development model or prototype of any such equipment. Additionally, sale of catalog or standard commercial items are exempt from this requirement.

(l) The Contractor shall promptly notify the Contracting Officer, in writing, if it has been tasked to evaluate or advise the Government concerning its own products or activities or those of a competitor in order to ensure proper safeguards exist to guarantee objectivity and to protect the Government's interest.

(m) The Contractor shall include this requirement in subcontracts of any tier which involve access to information or situations/conditions covered by the preceding paragraphs, substituting "subcontractor" for "contractor" where appropriate.

(n) The rights and remedies described herein shall not be exclusive and are in addition to other rights and remedies provided by law or elsewhere included in this contract.

(o) Compliance with this requirement is a material requirement of this contract.

#### **COMPUTER SOFTWARE AND/OR COMPUTER DATABASES DELIVERED TO AND/OR RECEIVED FROM THE GOVERNMENT (NAVSEA) (NOV 1996)**

(a) The Contractor agrees to test for viruses all computer software and/or computer databases, as defined in the clause entitled "RIGHTS IN NONCOMMERCIAL COMPUTER SOFTWARE AND NONCOMMERCIAL COMPUTER SOFTWARE DOCUMENTATION" (DFARS 252.227-7014), before delivery of that computer software or computer database in whatever media and on whatever system the software is delivered. The Contractor warrants that any such computer software and/or computer database will be free of viruses when delivered.

(b) The Contractor agrees to test any computer software and/or computer database(s) received from the

Government for viruses prior to use under this contract.

(c) Unless otherwise agreed in writing, any license agreement governing the use of any computer software to be delivered as a result of this contract must be paid-up and perpetual, or so nearly perpetual as to allow the use of the computer software or computer data base with the equipment for which it is obtained, or any replacement equipment, for so long as such equipment is used. Otherwise the computer software or computer data base does not meet the minimum functional requirements of this contract. In the event there is any routine to disable the computer software or computer data base in the future, that date certain shall not be less than 25 years after the delivery date of the computer software or computer database.

(d) No copy protection devices or systems shall be used in any computer software or computer database delivered under this contract to restrict or limit the Government from making copies. This does not prohibit license agreements from specifying the maximum amount of copies that can be made.

(e) Delivery by the Contractor to the Government of certain technical data and other data is now frequently required in digital form rather than as hard copy. Such delivery may cause confusion between data rights and computer software rights. It is agreed that, to the extent that any such data is computer software by virtue of its delivery in digital form, the Government will be licensed to use that digital-form data with exactly the same rights and limitations as if the data had been delivered as hard copy.

(f) Any limited rights legends or other allowed legends placed by a Contractor on technical data or other data delivered in digital form shall be digitally included on the same media as the digital-form data and must be associated with the corresponding digital-form technical data to which the legends apply to the extent possible. Such legends shall also be placed in human-readable form on a visible surface of the media carrying the digital-form data as delivered, to the extent possible.

#### **YEAR 2000 WARRANTY--COMMERCIAL SUPPLY ITEMS (NAVSEA) (NOV 1996)**

The Contractor warrants that each hardware, software, and firmware product delivered under this contract and listed below shall be able to accurately process date data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, including leap year calculations, when used in accordance with the product documentation provided by the Contractor, provided that all listed or unlisted products (e.g., hardware, software, firmware) used in combination with such listed product properly exchange date data with it. If the contract requires that specific listed products must perform as a system in accordance with the foregoing warranty, then that warranty shall apply to those listed products as a system. The duration of this warranty and the remedies available to the Government for breach of this warranty shall be as defined in, and subject to, the terms and limitations of the Contractor's standard commercial warranty or warranties contained in this contract, provided that notwithstanding any provision to the contrary in such commercial warranty or warranties, the remedies available to the Government under this warranty shall include repair or replacement of any listed product whose non-compliance is discovered and made known to the Contractor in writing within ninety (90) days after acceptance. Nothing in this warranty shall be construed to limit any rights or remedies the Government may otherwise have under this contract with respect to defects other than Year 2000 performance.

#### **YEAR 2000 WARRANTY--NON-COMMERCIAL SUPPLY ITEMS (NAVSEA) (NOV 1996)**

The Contractor warrants that each non-commercial item of hardware, software, and firmware delivered or developed under this contract and listed below shall be able to accurately process date data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, including leap year calculations, when used in accordance with the product documentation provided by the Contractor, provided that all listed or unlisted products (e.g., hardware, software, firmware) used in combination with such listed product properly exchange date data with it. If the contract requires that specific listed products must perform as a system in accordance with the foregoing warranty, then that warranty shall apply to those listed products as a system. The duration of this warranty and the remedies available to the Government for breach of this warranty shall be as defined in, and subject to, the terms and limitations of any general warranty provisions of this contract, provided that notwithstanding any provision to the contrary in such warranty provision(s), or in the absence of any such warranty provision(s), the remedies available to the Government under this warranty shall include repair or replacement of any listed item whose non-compliance is discovered and made known to the Contractor in writing within ninety (90) days after acceptance. Nothing in this warranty shall be construed to limit any rights or remedies the Government may otherwise have under this contract with respect to defects other than Year 2000 performance.

**END OF SECTION "C"**

**BEGINNING OF SECTION 'D'****SECTION "D" - PACKAGING AND MARKING****DATA PACKAGING LANGUAGE**

All unclassified data shall be prepared for shipment in accordance with best commercial practice. Classified reports, data, and documentation shall be prepared for shipment in accordance with National Industrial Security Program Operating Manual (NISPOM), DOD 5220.22-M dated January 1995.

**MARKING OF REPORTS (NAVSEA) (SEP 1990)**

All reports delivered by the Contractor to the Government under this contract shall prominently show on the cover of the report:

- (1) name and business address of the Contractor
- (2) contract number
- (3) contract dollar amount
- (4) whether the contract was competitively or non-competitively awarded
- (5) sponsor: \_\_\_\_\_  
(Name of Individual Sponsor)  
\_\_\_\_\_  
(Name of Requiring Activity)  
\_\_\_\_\_  
(City and State)

**MARKING OF WARRANTED ITEMS (NAVSURFWARCENDIV)**

(a) Each item covered by a warranty shall be stamped or marked in accordance with MIL-STD-129, Marking for Shipment and Storage. Where this is impracticable, written notice shall be attached to or furnished with the warranted item.

(b) Warranted items shall be marked with the following information: (1) National stock number or manufacturer's part number; (2) Serial number or other item identifier (if the warranty applies to uniquely identified items); (3) Contract number; (4) Indication that a warranty applies; (5) Manufacturer or entity (if other than the contractor) providing the warranty; (6) Date or time when the warranty expires; (7) Indication of whether or not attempted on-site repair by Government personnel will void the warranty.

**PACKAGING AND MARKING**

Commercial items shall be packaged and marked in accordance with contractor's standard practices unless special requirements are cited.

**PROHIBITED PACKING MATERIALS**

The use of asbestos, excelsior, newspaper or shredded paper (all types including waxed paper, computer paper and similar hygroscopic or non-neutral material) is prohibited. In addition, loose fill polystyrene is prohibited for shipboard use.

**INSTRUCTIONS FOR MARKING DISTRIBUTION STATEMENT**

The Contractor shall comply with the instructions cited below for placement of the distribution statement associated with data. The applicable distribution statement is identified on each Contract Data Requirements List (DD Form 1423-1). The distribution statement shall be displayed conspicuously on technical documents so as to be recognized readily by



receipts. The distribution statement shall appear on each front cover and title page of a report. If the technical document does not have a cover or title page, the applicable distribution statement shall be stamped or typed on the front page in a conspicuous position.

**END OF SECTION 'D'**

**BEGINNING OF SECTION 'E'****SECTION "E" - INSPECTION AND ACCEPTANCE****I. FEDERAL ACQUISITION REGULATION (FAR) (48 CFR CHAPTER 1) CLAUSES****II. DEFENSE FAR SUPPLEMENT (DFARS) (48 CFR CHAPTER 2) CLAUSES****PART I**

<u>Title and Date</u>	<u>FAR Subsection</u>
Inspection of Supplies--Fixed-Price (Aug 1996)	52.246-02
Inspection of Supplies--Cost Reimbursement (Apr 1984)	52.246-03
Inspection of Services--Fixed-Price (Aug 1996)	52.246-04
Inspection of Services--Cost Reimbursement (Apr 1984)	52.246-05
Inspection of Research and Development--Cost-Reimbursement (Apr 1984)	52.246-08
Responsibility for Supplies (Apr 1984)	52.246-16

**CLAUSES IN FULL TEXT****INSPECTION AND ACCEPTANCE LANGUAGE FOR DATA**

Inspection and acceptance of all data shall be as specified on the attached Contract Data Requirements List(s), DD Form 1423s.

**INSPECTION AND ACCEPTANCE (SPECIAL CONDITIONS) (NAVSURFWARCENDIV)** (Note: Fill-ins to be completed at time of award)

(a) Initial inspection of the supplies to be furnished hereunder shall be made by \_\_\_\_\_ at the contractor's or subcontractor's plant located at \_\_\_\_\_. The cognizant inspector shall be notified when the material is available for inspection. The place designated for such actions may not be changed without authorization of the Contracting Officer. Final inspection and acceptance shall be made by \_\_\_\_\_ within \_\_\_\_ days after \_\_\_\_\_.

(b) Initial inspection shall consist of quality assurance at point of manufacture and/or assembly and check/test prior to shipment. Final inspection and acceptance will be made by the Receiving Activity after installation/check out/testing of the supplies.

**ACCEPTANCE VERIFICATION**

The Government shall accept/reject supplies/services to be provided hereunder within 7 days after receipt of supplies/services at NAVSURFWARCENDIV Crane unless otherwise specified by the respective DD 1423 for data items.

**COST OF QUALITY DATA (NAVSEA) (MAY 1995)**

Cost of Quality Data: The contractor shall maintain and use quality cost data as a management element of the quality program. The contractor will determine the specific quality cost data to be maintained and used. These data shall, on request, be identified and made available for "on site" review by the Government representative.

**GOVERNMENT FURNISHED MATERIAL (NAVSEA) (MAY 1995)**

Government Furnished Material: When material is furnished by the Government, the contractor's procedures shall include at least the following: (a) Examination upon receipt, consistent with practicality, to detect damage in transit; (b) Inspection for completeness and proper type; (c) Periodic inspection and precautions to assure adequate storage conditions and to guard against damage from handling and deterioration during storage; (d) Functional testing, either prior to or after installation, or both, as required by contract to determine satisfactory operation; (e) Identification and protection from improper use or disposition; and (f) Verification of quantity.

Damaged Government Furnished Material: The contractor shall report to the Government representative any Government-furnished property found damaged, malfunctioning, or otherwise unsuitable for use. In event of damage or malfunction during or after installation, the contractor shall determine and record probable cause and necessity for withholding material

from use.

**Bailed Property:** The contractor shall, as required by the terms of the Bailment Agreement, establish procedures for the adequate storage, maintenance, and inspection of bailed Government property. Records of all inspections and maintenance performed on bailed property shall be maintained. These procedures and records shall be subject to review by the Government representative.

[As used in the foregoing, the term "material" applies to Government-furnished equipment to be installed in or furnished with the end item. The term "property" is Government equipment that is used in the fabrication or assembly of the end item, and is not delivered as part of the end item.]

## **INSPECTION AND TEST RECORDS (MAY 1995)**

**Inspection and Test Records:** Inspection and test records shall, as a minimum, indicate the nature of the observations, number of observations made, and the number and type of deficiencies found. Data included in inspection and test records shall be complete and accurate, and shall be used for trend analysis and to assess corrective action and effectiveness.

## **QUALITY IN SOFTWARE DEVELOPMENT AND PRODUCTION (NAVSEA) (MAY 1995)**

**Quality in Software Development and Production:** The contractor's software quality program shall be an integral part of the overall Quality Assurance Program. Software quality program controls shall be applicable to all project software that is developed, maintained, or modified within the following categories: (a) All deliverable software; (b) All deliverable software that is included as part of deliverable hardware or firmware; (c) Non deliverable software (commercially available or user-developed) used for development, fabrication, testing, or acceptance of deliverable software or hardware (includes automated fabrication, test, and inspection/acceptance equipment software and software design, test, and inspection tools); and (d) Commercially available, reusable, or Government software designated as part of a deliverable item.

## **END OF SECTION "E"**

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## **BEGINNING OF SECTION "F"**

# **SECTION "F" - DELIVERIES OR PERFORMANCE**

## PART I

<u>Title and Date</u>	<u>FAR Subsection</u>
Delivery of Excess Quantities (Sep 1989)	52.211-17
Stop Work Order (Aug 1989)	52.242-15
Stop Work Order (Aug 1989)--Alternate I (Apr 1984)	52.242-15
Government Delay of Work (Apr 1984)	52.242-17
F.o.b. Destination (Nov 1991)	52.247-34
F.o.b. Point for Delivery of Government-Furnished Property (Apr 1984)	52.247-55

## CLAUSES IN FULL TEXT

## **DATA DELIVERY LANGUAGE FOR SERVICES PROCUREMENTS**

All data to be furnished under this contract shall be delivered prepaid to destination(s) at the time(s) specified on the Contract Data Requirements List(s), DD Form 1423.

## **DELIVERY LANGUAGE FOR F.O.B. DESTINATION**

All supplies hereunder shall be delivered with all transportation charges prepaid, in accordance with the clause hereof entitled "F.O.B. DESTINATION" (FAR 52.247-34) in accordance with the Shipping Instruction Data, NAVSEA 4336/1, attached hereto.

The Contractor shall not ship directly to a military air or water port terminal without authorization by the cognizant Contract Administration Office.

Except when the Material Inspection and Receiving Report (MIRR) (DD 250) is used as an invoice, the Contractor shall enter unit prices on all MIRR copies. Contract line items shall be priced using actual prices, or if not available, estimated prices. When the price is estimated, an "E" shall be entered after the price.

#### **PLACE OF DELIVERY**

The material to be furnished hereunder shall be delivered F.o.b. destination with all transportation charges paid by the supplier to:

RECEIVING OFFICER  
BLDG 41S CODE 1121  
NAVSURFWARCDIV  
CRANE, IN 47522-5011  
Mark For: \*  
Attn: \*

The contractor shall schedule deliveries under this contract to ensure arrival at destination only on Monday through Friday (excluding holidays) between the hours of 7:00 AM and 2:00 PM EST. The receiving facility for this material is closed on Saturdays and Sundays.

\*To be completed on individual delivery orders as necessary.

#### **TIME OF PERFORMANCE (SERVICES)**

Services to be furnished under ITEM 0001 hereunder shall be performed and completed within \* days from the effective date of the contract. The time of performance may be extended by the exercise of options via written modification to the contract as provided for elsewhere herein.

\*DOs may be placed during the ordering period established by the contract. Performance periods of individual DOs will be specified within the individual DOs.

#### **END OF SECTION 'F'**

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#### **BEGINNING OF SECTION "G"**

### **SECTION "G" - CONTRACT ADMINISTRATION DATA**

#### PART I

Title and Date  
Contracting Officer's Representative (Dec 1991)

DFARS Subsection  
252.201-7000

#### CLAUSES IN FULL TEXT

#### **SUBMISSION OF INVOICES (FIXED PRICE) (JUL 1992) (NAPS 5252.232-9000)**

(a) "Invoice" as used in this clause does not include contractor's requests for progress payments.

(b) The contractor shall submit original invoices with 4 copies to the address identified in the solicitation/contract award form (SF 26 - Block 10; SF 33 - Block 23; SF 1447 - Block 14), unless delivery orders are applicable, in which case invoices will be segregated by individual order and submitted to the address specified in the order (DD 1155 - Block 13 or SF 26 Block 10).

(c) The use of copies of the Material Inspection and Receiving Report (MIRR), DD Form 250, as an invoice is encouraged. DFARS Appendix F-306 provides instructions for such use. Copies of the MIRR used as an invoice are in addition to the standard distribution stated in DFARS F-401.

(d) In addition to the requirements of the Prompt Payment clause of this contract, the contractor shall cite on each invoice the contract line item number (CLIN); the contract subline item number (SLIN), if applicable; the accounting classification reference number (ACRN) as identified on the financial accounting data sheets, and the payment terms.

(e) The contractor shall prepare:

- ☐ a separate invoice for each activity designated to receive the supplies or services.
- ☒ a consolidated invoice covering all shipments delivered under an individual order.
- ☐ either of the above.

(f) If acceptance is at origin, the contractor shall submit the MIRR or other acceptance verification directly to the designated payment office. If acceptance is at destination, the consignee will forward acceptance verification to the designated payment office.

**SUBMISSION OF INVOICES (COST-REIMBURSEMENT, TIME-AND-MATERIALS, LABOR-HOUR, OR FIXED PRICE INCENTIVE) (JUL 1992) (NAPS 5252.232-9001)** Note: Fill-ins will be completed at time of award.

(a) "Invoice" as used in this clause includes contractor requests for interim payments using public vouchers (SF 1034) but does not include contractor requests for progress payments under fixed price incentive contracts.

(b) The Contractor shall submit invoices and any necessary supporting documentation, in an original and four copies, to the contract auditor\* at the following address:

\_\_\_\_\_  
unless delivery orders are applicable, in which case invoices will be segregated by individual order and submitted to the address specified in the order. In addition, an information copy shall be submitted to \_\_\_\_\_.  
Following verification, the contract auditor\* will forward the invoice to the designated payment office for payment in the amount determined to be owing, in accordance with the applicable payment (and fee) clause(s) of this contract.

(c) Invoices requesting interim payments shall be submitted no more than once every two weeks, unless another time period is specified in the Payments clause of this contract. For indefinite delivery type contracts, interim payment invoices shall be submitted no more than once every two weeks for each delivery order. There shall be a lapse of no more than    calendar days between performance and submission of an interim payment invoice.

(d) In addition to the information identified in the Prompt Payment clause herein, each invoice shall contain the following information, as applicable:

- (1) Contract line item number (CLIN)
- (2) Subline item number (SLIN)
- (3) Accounting Classification Reference Number (ACRN)
- (4) Payment terms
- (5) Procuring activity
- (6) Date supplies provided or services performed
- (7) Costs incurred and allowable under the contract
- (8) Vessel (e.g., ship, submarine or other craft) or system for which supply/service is provided

(e) A DD Form 250, "Material Inspection and Receiving Report",

☐ is required with each invoice submittal.

☐ is required only with the final invoice.

☒ is not required.

(f) A Certificate of Performance

☒ shall be provided with each invoice submittal.

☐ is not required.

(g) The Contractor's final invoice shall be identified as such, and shall list all other invoices (if any) previously tendered under this contract.

(h) Costs of performance shall be segregated, accumulated and invoiced to the appropriate ACRN categories to the extent possible. When such segregation of costs by ACRN is not possible for invoices submitted with CLINS/SLINS with more than one ACRN, an allocation ratio shall be established in the same ratio as the obligations cited in the accounting data so that costs are allocated on a proportional basis.

**INVOICES FOR CLASSIFIED CONTRACTS (JUL 1992) (NAPS 5252.232-9002)**

To prevent disclosure of classified information, invoices submitted under this contract shall be so prepared that the supplies or services covered thereby can be identified only by reference to the contract. For example, the invoices may state

"Contract N\_\_\_\_\_, Item 0001, 100 EA @ \$1.00 - \$100.00." The security classification shown on the contract shall not appear on the invoice.

#### CONTRACT ADMINISTRATION DATA LANGUAGE

(a) Enter below the Contractor's address for receipt of payment if such address is different from the address shown on the SF 26 or SF 33, as applicable.

(b) Enter below the address (street and number, city, county, state and zip code) of the Contractor's facility which will administer the contract if such address is different from the address shown on the SF 26 or SF 33, as applicable.

#### CONTRACTING OFFICER'S REPRESENTATIVE LANGUAGE

CONTRACTING OFFICER'S REPRESENTATIVE: COMMANDER ATTN: CODE 1164EE, BLDG 64, NAVAL SURFACE WARFARE CENTER, CRANE DIVISION, CRANE IN 47522-5001. Telephone No. 812-854-3723. The Contractor shall forward a copy of all invoices to the Contracting Officer's Representative.

#### SECURITY ADMINISTRATION

The highest level of security required under this contract is "Secret" as designated on DD Form 254 attached hereto and made a part hereof.

The Commander, Defense Investigative Service, Director of Industrial Security, \_\_\_\_\_\*\_\_\_\_\_ Region, is designated Security Administrator for the purpose of administering all elements of military security hereunder.

- To be filled in at time of award.

#### END OF SECTION "G"

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#### BEGINNING OF SECTION "H"

### SECTION "H" - SPECIAL CONTRACT REQUIREMENTS

#### ADDITIONAL DEFINITIONS (MAY 1993) (NAVSEA 5252.202-9101)

As used throughout this contract, the following terms shall have the meanings set forth below:

(a) DEPARTMENT - means the Department of the Navy.

(b) REFERENCES TO THE FEDERAL ACQUISITION REGULATION (FAR) - All references to the FAR in this contract shall be deemed to also reference the appropriate sections of the Defense FAR Supplement (DFARS), unless clearly indicated otherwise.

(c) REFERENCES TO ARMED SERVICES PROCUREMENT REGULATION OR DEFENSE ACQUISITION REGULATION - All references in this document to either the Armed Services Procurement Regulation (ASPR) or the Defense Acquisition Regulation (DAR) shall be deemed to be references to the appropriate sections of the FAR/DFARS.

(d) NATIONAL STOCK NUMBERS - Whenever the term Federal Item Identification Number and its acronym FIIN or the term Federal Stock Number and its acronym FSN appear in the contract, order or their cited specifications and standards, the terms and acronyms shall be interpreted as National Item Identification Number (NIIN) and National Stock Number (NSN) respectively which shall be defined as follows:

(1) National Item Identification Number (NIIN). The number assigned to each approved Item Identification under the Federal Cataloging Program. It consists of nine numeric characters, the first two of which are the National Codification Bureau (NCB) Code. The remaining positions consist of a seven digit non-significant number.

(2) National Stock Number (NSN). The National Stock Number (NSN) for an item of supply consists of the applicable four position Federal Supply Class (FSC) plus the applicable nine position NIIN assigned to the item of supply.

**GOVERNMENT-FURNISHED PROPERTY (PERFORMANCE) (SEP 1990) (NAVSEA 5252.245-9108)**

The Government will provide only that property set forth below, notwithstanding any term or condition of this contract to the contrary. Upon Contractor's written request to the cognizant Technical Program Manager, via the cognizant Contract Administration Office, the Government will furnish the following for use in the performance of this contract:

Note: Government-Furnished Property will be identified on individual DOs as necessary.

**GOVERNMENT-INDUSTRY DATA EXCHANGE PROGRAM (Jul 1995) (NAVSEA 5252.227-9113)**

(a) The Contractor shall participate in the appropriate interchange of the Government-Industry Data Exchange Program (GIDEP) in accordance with NAVSEA S0300-BU-GYD-010 dated November 1994. Data entered is retained by the program and provided to qualified participants. Compliance with this requirement shall not relieve the Contractor from complying with any other requirement of the contract.

(b) The Contractor agrees to insert paragraph (a) of this requirement in any subcontract hereunder exceeding \$500,000.00. When so inserted, the word "Contractor" shall be changed to "Subcontractor".

**LEVEL OF EFFORT (JUL 1986) (NAVSEA 5252.216-9122)**

(a) The Contractor agrees to provide the total level of effort specified in the next sentence in performance of the work described in Sections B and C of this contract. The total level of effort for the performance of this contract shall be \_\_\_\_\_ total man-hours of direct labor, including subcontractor direct labor for those subcontractors specifically identified in the Contractor's proposal as having hours included in the proposed level of effort.

(b) Of the total man-hours of direct labor set forth above, it is estimated that \_\_\_\_\_ (Offeror to fill-in) man-hours are uncompensated effort. Uncompensated effort is defined as hours provided by personnel in excess of 40 hours per week without additional compensation for such excess work. All other effort is defined as compensated effort. If no effort is indicated in the first sentence of this paragraph, uncompensated effort performed by the Contractor shall not be counted in fulfillment of the level of effort obligations under this contract.

(c) Effort performed in fulfilling the total level of effort obligations specified above shall only include effort performed in direct support of this contract and shall not include time and effort expended on such things as (local travel to and from an employee's usual work location), uncompensated effort while on travel status, truncated lunch periods, work (actual or inferred) at an employee's residence or other non-work locations, or other time and effort which does not have a specific and direct contribution to the tasks described in Sections B and C.

(d) The level of effort for this contract shall be expended at an average rate of approximately hours per week. It is understood and agreed that the rate of man-hours per month may fluctuate in pursuit of the technical objective, provided such fluctuation does not result in the use of the total man-hours of effort prior to the expiration of the term hereof, except as provided in the following paragraph.

(e) If, during the term hereof, the Contractor finds it necessary to accelerate the expenditure of direct labor to such an extent that the total man-hours of effort specified above would be used prior to the expiration of the term, the Contractor shall notify the Contracting Officer in writing setting forth the acceleration required, the probable benefits which would result, and an offer to undertake the acceleration at no increase in the estimated cost or fee together with an offer, setting forth a proposed level of effort, cost breakdown, and proposed fee, for continuation of the work until expiration of the term hereof. The offer shall provide that the work proposed will be subject to the terms and conditions of this contract and any additions or changes required by then current law, regulations, or directives, and that the offer, with a written notice of acceptance by the Contracting Officer, shall constitute a binding contract. The Contractor shall not accelerate any effort until receipt of such written approval by the Contracting Officer. Any agreement to accelerate will be formalized by contract modification.

(f) The Contracting Officer may, by written order, direct the Contractor to accelerate the expenditure of direct labor such that the total man-hours of effort specified in paragraph (a) above would be used prior to the expiration of the term. This order shall specify the acceleration required and the resulting revised term. The Contractor shall acknowledge this order within five days of receipt.

(g) If the total level of effort specified in paragraph (a) above is not provided by the Contractor during the period of this contract, the Contracting Officer, at its sole discretion, shall either (i) reduce the fee of this contract as follows:

$$\text{Fee Reduction} = \text{Fee} \times (\text{Required LOE} - \text{Expended LOE}) / \text{Required LOE}$$

or (ii) subject to the provisions of the clause of this contract entitled "LIMITATION OF COST" (FAR 52.232-20) or "LIMITATION OF COST (FACILITIES)" (FAR 52.232-21), as applicable, require the Contractor to continue to perform the work until the total number of man-hours of direct labor specified in paragraph (a) above shall have been expended, at no increase in the fee of this contract.

(h) The Contractor shall provide and maintain an accounting system, acceptable to the Administrative Contracting Officer and the Defense Contract Audit Agency (DCAA), which collects costs incurred and effort (compensated and uncompensated, if any) provided in fulfillment of the level of effort obligations of this contract. The Contractor shall indicate on each invoice the total level of effort claimed during the period covered by the invoice, separately identifying compensated effort and uncompensated effort, if any.

(i) Within 45 days after completion of the work under each separately identified period of performance hereunder, the Contractor shall submit the following information in writing to the Contracting Officer with copies to the cognizant Contract Administration Office and to the DCAA office to which vouchers are submitted: (1) the total number of man-hours of direct labor expended during the applicable period; (2) a breakdown of this total showing the number of man-hours expended in each direct labor classification and associated direct and indirect costs; (3) a breakdown of other costs incurred; and (4) the Contractor's estimate of the total allowable cost incurred under the contract for the period. Within 45 days after completion of the work under the contract, the Contractor shall submit, in addition, in the case of a cost underrun; (5) the amount by which the estimated cost of this contract may be reduced to recover excess funds and, in the case of an underrun in hours specified as the total level of effort; and (6) a calculation of the appropriate fee reduction in accordance with this clause. All submissions shall include subcontractor information.

(j) Notwithstanding any of the provisions in the above paragraphs, the Contractor may furnish man-hours up to five percent in excess of the total man-hours specified in paragraph (a) above, provided that the additional effort is furnished within the term hereof, and provided further that no increase in the estimated cost or fee is required.

Note: This clause will be invoked and completed, as applicable, on any LOE DO. References to "contract" apply to individual DOs.

#### **RENT-FREE USE OF GOVERNMENT PRODUCTION AND RESEARCH PROPERTY (AS IS) (SEP 1990) (NAVSEA 5252.245-9111)**

(a) The Contractor may use on a rent-free basis, as necessary for the performance of this contract, Government production and research property (as defined in FAR 45.301) accountable under Contract(s). The said property shall be governed by the terms and conditions of the contract(s) under which it is accountable. No representation or warranty is made by the Government as to the fitness or suitability of said property for its intended use under this contract; it being understood and agreed that the said property is being made available for use under this contract on an "as is" basis in accordance with the clause entitled "GOVERNMENT PROPERTY FURNISHED 'AS IS'" (FAR 52.245-19).

(b) If the Government limits or terminates the Contractor's authority to use the above referenced property and the Government's action affects the Contractor's ability to perform this contract, then an equitable adjustment shall be made in accordance with the terms and conditions of the "CHANGES" clause of this contract; provided, however, that if the limitation or termination is due to failure by the Contractor to perform its obligations under the above referenced contract(s), the Contractor shall be entitled only to such adjustment as the Contracting Officer determines to be appropriate under the circumstances.

#### **RENT-FREE USE OF GOVERNMENT PROPERTY (SEP 1990) (NAVSEA 5252.245-9115)**

The Contractor may use on a rent-free, non-interference basis, as necessary for the performance of this contract, the Government property accountable under Contract(s). The Contractor is responsible for scheduling the use of all property covered by the above referenced contract(s) and the Government shall not be responsible for conflicts, delays, or disruptions to any work performed by the Contractor due to use of any or all of such property under this contract or any other contracts under which use of such property is authorized.

#### **SUBSTITUTION OF PERSONNEL (SEP 1990) (NAVSEA 5252.237-9106)**

(a) The Contractor agrees that a partial basis for award of this contract is the list of key personnel proposed. Accordingly, the Contractor agrees to assign to this contract those key persons whose resumes were submitted with the proposal necessary to fulfill the requirements of the contract. No substitution shall be made without prior notification to and concurrence of the Contracting Officer in accordance with this requirement.

(b) All proposed substitutes shall have qualifications equal to or higher than the qualifications of the person to be



replaced. The Contracting Officer shall be notified in writing of any proposed substitution at least forty-five (45) days, or ninety (90) days if a security clearance is to be obtained, in advance of the proposed substitution. Such notification shall include: (1) an explanation of the circumstances necessitating the substitution; (2) a complete resume of the proposed substitute; and (3) any other information requested by the Contracting Officer to enable him/her to judge whether or not the Contractor is maintaining the same high quality of personnel that provided the partial basis for award.

## **SECTION "H" - SPECIAL CONTRACT REQUIREMENTS**

### **TECHNOLOGY IMPROVEMENTS (OCT 1991) (NAVSEA 5252.239-9605)**

After contract award, the Government may solicit, and the Contractor is encouraged to propose independently, technology improvements to the equipment, software specifications, or other requirements of the contract. These improvements may be proposed to save money, to improve performance, to save energy or for any other purpose which presents a technological advantage to the Government. As part of the proposed changes, the Contractor shall submit a price proposal to the Contracting Officer for evaluation. Those proposed technology improvements that are acceptable to the Government will be processed as modifications to the contract.

As a minimum, the following information shall be submitted by the Contractor with each proposal: (1) A description of the difference between the existing contract requirement and the proposed change, and the comparative advantages and disadvantages of each; (2) Itemized requirements of the contract which must be changed if the proposal is adopted, and proposed revision to the contract for each such change; (3) An estimate of the changes in performance and cost, if any, that will result from adoption of the proposal; (4) An evaluation of the effects the proposed changes would have on collateral costs to the Government, such as Government-furnished property costs, costs of related items, and costs of maintenance, operation and conversion (including Government application software); (5) A statement of the time by which the contract modification adopting the proposal must be issued so as to obtain the maximum benefits of the changes during the remainder of this contract including supporting rationale; and (6) Any effect on the contract completion time or delivery schedule shall be identified.

The Government reserves the right to require a rerun of selected portions of the live test demonstration to verify the proposed improvement, at no additional charge to the Government. The Government will not be liable for proposal preparation costs or any delay in acting upon any proposal submitted pursuant to this clause. The Contractor has the right to withdraw, in whole or in part, any proposal not accepted by the Government within the period specified in the proposal. The decision of the Contracting Officer as to the acceptance of any such proposal under this contract is final and not subject to the "Disputes" Clause of this contract. The Contracting Officer may accept any proposal submitted pursuant to this clause by giving the Contractor written notice thereof. This written notice will be given by issuance of a modification to this contract. Unless and until a modification is executed to incorporate a proposal under this contract, the Contractor shall remain obligated to perform in accordance with the requirements, terms and conditions of the existing contract. If a proposal submitted pursuant to this clause is accepted and applied to this contract, the equitable adjustment increasing or decreasing the contract price shall be in accordance with the procedures of the "Changes" clause. The resulting contract modification will state that it is made pursuant to this clause.

### **STANDARD COMMERCIAL WARRANTY (NAVSURFWARCENDIV)**

The contractor shall extend to the Government the full coverage of any standard commercial warranty normally offered in a similar commercial sale, provided such warranty is available at no additional cost to the Government. Acceptance of the standard commercial warranty does not waive the Government's rights under the "Inspection" clause nor does it limit the Government's rights with regard to the other terms and conditions of this contract. In the event of a conflict, the terms and conditions of the contract shall take precedence over the standard commercial warranty. The standard commercial warranty period shall begin upon final acceptance of the applicable material and/or services listed in the Schedule.

The contractor shall provide a copy of its standard commercial warranty (if applicable) with its offer. The warranty covers a period of \\_\\_ months. (Offeror is to insert number.)

**END OF SECTION "H"**

**BEGINNING OF SECTION "I"****SECTION "I" - CONTRACT CLAUSES**PART I

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Gratuities (Apr 1984)	52.203-03
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Restrictions on Subcontractor Sales to the Government (Jul 1995)	52.203-06
Anti-Kickback Procedures (Jul 1995)	52.203-07
Cancellation, Rescission, and Recovery of Funds for illegal or Improper Activity (Jan 1997)	52.203-08
Price or Fee Adjustment for Illegal or Improper Activity (Jan 1997)	52.203-10
Limitation on Payments to Influence Certain Federal Transactions (Jan 1990)	52.203-12
Security Requirements (Aug 1996)	52.204-02
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Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Debarment (Jul 1995)	52.209-06
Material Requirements (Oct 1997)	52.211-05
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Changes or Additions to Make-or-Buy Program (Oct 1997)--Alternate II (Oct 1997)	52.215-09
Price Reduction for Defective Cost or Pricing Data (Oct 1997)	52.215-10
Subcontractor Cost or Pricing Data (Oct 1997)	52.215-12
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Reversion or Adjustment of Plans for Postretirement Benefits Other Than Pensions (Oct 1997)	52.215-18
Notification of Ownership Changes (Oct 1997)	52.215-19
Allowable Cost and Payment (Apr 1998)	52.216-07
Fixed Fee (Mar 1997)	52.216-08
Requirements (Oct 1995)	52.216-21
Option for Increased Quantity-Separately Priced Line Item (Mar 1989)	52.217-07
Option to Extend Services (Aug 1989)	52.217-08
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Limitations on Subcontracting (Dec 1996)	52.219-14
Convict Labor (Aug 1996)	52.222-03
Affirmative Action for Disabled and Vietnam Era Veterans (Apr 1998)	52.222-35
Affirmative Action for Handicapped Workers (Apr 1984)	52.222-36
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Fair Labor Standards Act and Service Contract Act--Price Adjustment (May 1989)	52.222-44
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Restrictions on Certain Foreign Purchases (Oct 1996)	52.225-11
Utilization of Indian Organizations and Indian-Owned Economic Enterprises (Sep 1996)	52.226-01
Authorization and Consent (Apr 1984)--Alternate I (Apr 1984)	52.227-01
Notice and Assistance Regarding Patent and Copyright Infringement (Aug 1996)	52.227-02
Filing of Patent Applications--Classified Subject Matter (Apr 1984)	52.227-10
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Insurance--Liability to Third Persons (Mar 1996)	52.228-07
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Federal, State, and Local Taxes (Jan 1991)	52.229-03
Taxes--Contracts performed in U.S. Possessions or Puerto Rico (Apr 1984)	52.229-05

Payments (Apr 1984)	52.232-01
Payments under Fixed-Price Research and Development Contracts (Apr 1984)	52.232-02
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Changes--Cost-Reimbursement (Aug 1987)--Alternate II (Apr 1984)	52.243-02
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## PART II

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Acquisition Streamlining (Dec 1991)	252.211-7000
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Preference for Certain Domestic Commodities (Feb 1997)	252.225-7012
Reporting of Contract Performance Outside the United States (Mar 1998)	252.225-7026
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(Jun 1995)	
Technical Data - Commercial Items (Nov 1995)	252.227-7015
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Deferred Delivery of Technical Data or Computer Software (Apr 1988)	252.227-7026
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Reports of Government Property (May 1994)	252.245-7001
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Warranty of Data (Dec 1991)--Alternate II (Dec 1991)	252.246-7001
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Recovery of Nonrecurring Costs and on Royalty Fees on Commercial Sales (Dec 1991)	252.270-7000

#### CLAUSES IN FULL TEXT

#### **ORDERING (OCT 1995) (FAR 52.216-18)**

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued from the effective date of contract through two years from the effective date of contract (three years if option I is exercised, four years if option II is exercised, and five years if option III is exercised).

(b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order or task order and this contract, the contract shall control.

(c) If mailed, a delivery order or task order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally, by facsimile, or by electronic commerce methods only if authorized in the Schedule.

#### **ORDER LIMITATIONS (OCT 1995) (FAR 52.216-19)**

(a) Minimum Order. When the Government requires supplies or services covered by this contract in an amount of less than \$2,500, the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

(b) Maximum Order. The Contractor is not obligated to honor--

(1) Any order for a single item in excess of \$10,000,000;

(2) Any order for a combination of items in excess of \$10,000,000; or

(3) A series of orders from the same ordering office within 30 days that together call for quantities exceeding the limitation in subparagraph (1) or (2) of this section.

(c) If this is a requirement contract (i.e., includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR), the Government is not required to order a part of any one requirement from the Contractor if that requirement exceeds the maximum-order limitations in paragraph (b) above.

(d) Notwithstanding paragraphs (b) and (c) above, the Contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within 14 days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for the reasons. Upon receiving this notice, the Government may acquire the supplies or service from another source.

#### **INDEFINITE QUANTITY (OCT 1995) (FAR 52.216-22)**

(a) This is an indefinite-quantity contract for the supplies or services specified, and effective for the period stated, in

the Schedule. The quantities of supplies and services specified in the Schedule are estimates only and are not purchased by this contract.

(b) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering clause. The Contractor shall furnish to the Government, when and if ordered, the supplies or services specified in the Schedule up to and including the quantity designated in the Schedule as the "maximum". The Government shall order at least the quantity of supplies or services designated in the Schedule as the "minimum."

(c) Except for any limitations on quantities in the Order Limitations clause or in the Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(d) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period; provided, that the Contractor shall not be required to make any deliveries under this contract after six months from the expiration of the ordering period.

#### **OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 1989) (FAR 52.217-9)**

(a) The Government may extend the term of this contract by written notice to the Contractor at any time prior to expiration of the contract; *provided*, that the Government shall give the Contractor a preliminary written notice of its intent to extend at least 30 days before the contract expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option provision.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed five years (60 months).

#### **PAYMENT FOR OVERTIME PREMIUMS (JUL 1990) (FAR 52.222-2)**

(a) The use of overtime is authorized under this contract if the overtime premium does not exceed normal wage rates or the overtime premium is paid for work--

(1) Necessary to cope with emergencies such as those resulting from accidents, natural disasters, breakdowns of production equipment, or occasional production bottlenecks of a sporadic nature;

(2) By indirect-labor employees such as those performing duties in connection with administration, protection, transportation, maintenance, standby plant protection, operation of utilities, or accounting;

(3) To perform tests, industrial processes, laboratory procedures, loading or unloading of transportation conveyances, and operations in flight or afloat that are continuous in nature and cannot reasonably be interrupted or completed otherwise; or

(4) That will result in lower overall costs to the Government.

(b) Any request for estimated overtime premiums that exceeds the amount specified above shall include all estimated overtime for contract completion and shall--

(1) Identify the work unit; e.g., department or section in which the requested overtime will be used, together with present workload, staffing, and other data of the affected unit sufficient to permit the Contracting Officer to evaluate the necessity for the overtime;

(2) Demonstrate the effect that denial of the request will have on the contract delivery or performance schedule;

(3) Identify the extent to which approval of overtime would affect the performance or payments in connection with other Government contracts, together with identification of each affected contract; and

(4) Provide reasons why the required work cannot be performed by using multishift operations or by employing additional personnel. \*Insert either "zero" or the dollar amount agreed to during negotiations. The inserted figure does not apply to the exceptions in subparagraph (a)(1) through (a)(4) of the clause.

#### **PROHIBITION OF SEGREGATED FACILITIES (52.222-21) (APR 1984) (DEVIATION)**

(a) "Segregated facilities," as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex or national origin because

of written or oral policies, or employee custom. The term does not include separate or single-user rest rooms and necessary dressing or sleeping areas, which shall be provided to assure privacy between the sexes.

(b) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity Clause in this contract.

(c) The Contractor shall include this clause in every subcontract that contains the clause of this contract entitled "Equal Opportunity."

#### **EQUAL OPPORTUNITY (APR 1984)(FAR 52.222-26) (DEVIATION)**

(a) If, during any 12-month period (including the 12 months preceding the award of this contract), the Contractor has been or is awarded nonexempt Federal contracts and/or subcontracts that have an aggregate value in excess of \$10,000, the Contractor shall comply with subparagraphs (b)(1) through (11) below. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.

(b) During performing this contract, the Contractor agrees as follows:

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. It shall not be a violation of E.O. 11246 for a contractor to extend a publicly announced preference in employment to Indians living on or near an Indian reservation in connection with employment opportunities on or near an Indian reservation. See 22.807(b)(4).

(2) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. This shall include, but not be limited to-- (i) Employment; (ii) Upgrading; (iii) Demotion; (iv) Transfer; (v) Recruitment or recruitment advertising; (vi) Layoff or termination; (vii) Rates of pay or other forms of compensation; and (viii) Selection for training, including apprenticeship.

(3) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.

(4) The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(5) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.

(7) The Contractor shall furnish to the contracting agency all information required by Executive Order 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor. The Contractor shall, within 30 days following the award, file Standard Form 100 (EEO-1), or any successor form, unless filed within 12 months preceding the date of award.

(8) The Contractor shall permit access to its premises by the contracting officer or the Office of Federal Contract Compliance Programs (OFCCP) for the purpose of conducting on-site compliance reviews and inspecting such books, records, accounts and other materials as may be relevant to an investigation to ascertain the Contractor's compliance with the applicable rules, regulations, and orders.

(9) If the OFCCP determines that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended, in the rules, regulations, and orders of the Secretary of Labor; or as otherwise provided by law.

(10) The Contractor shall include the terms and conditions of subparagraph (b)(1) through (11) of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) The Contractor shall take such action with respect to any subcontract or purchase order as the contracting officer may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; provided, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any

direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

(c) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in 41 CFR 60-1.1.

#### **SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS (APR 1998) (FAR 52.244-6)**

(a) Definition.

"Commercial item", as used in this clause, has the meaning contained in the clause at 52.202-1, Definitions.

"Subcontract", as used in this clause, includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

(c) Notwithstanding any other clause of this contract, the Contractor is not required to include any FAR provision or clause, other than those listed below to the extent they are applicable and as may be required to establish the reasonableness of prices under Part 15, in a subcontract at any tier for commercial items or commercial components:

(1) 52.222-26, Equal Opportunity (E.O. 11246);

(2) 52.222-35, Affirmative Action for Disabled and Vietnam Era Veterans (38 U.S.C. 4212(a));

(3) 52.222-36, Affirmative Action for Handicapped Workers (29 U.S.C. 793); and

(4) 52.247-64, Preference for Privately-Owned U.S.-Flagged Commercial Vessels (46 U.S.C. 1241)(flow down not required for subcontracts awarded beginning May 1, 1996).

(d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

#### **GOVERNMENT PROPERTY (COST-REIMBURSEMENT, TIME-AND-MATERIAL, OR LABOR-HOUR CONTRACTS) (JAN 1986)**

(a) Government-furnished property.

(1) The term "Contractor's managerial personnel," as used in paragraph (g) of this clause, means any of the Contractor's directors, officers, managers, superintendents, or equivalent representatives who have supervision or direction of--

(i) All or substantially all of the Contractor's business;

(ii) All or substantially all of the Contractor's operation at any one plant, or separate location at which the contract is being performed; or

(iii) A separate and complete major industrial operation connected with performing this contract.

(2) The Government shall deliver to the Contractor, for use in connection with and under the terms of this contract, the Government-furnished property described in the Schedule or specifications, together with such related data and information as the Contractor may request and as may be reasonably required for the intended use of the property (hereinafter referred to as "Government-furnished property").

(3) The delivery or performance dates for this contract are based upon the expectation that Government-furnished property suitable for use will be delivered to the Contractor at the times stated in the Schedule or, if not so stated, in sufficient time to enable the Contractor to meet the contract's delivery or performance dates.

(4) If Government-furnished property is received by the Contractor in a condition not suitable for the intended use, the Contractor shall, upon receipt, notify the Contracting Officer, detailing the facts, and, as directed by the Contracting Officer and at Government expense, either effect repairs or modification or return or otherwise dispose of the property. After completing the directed action and upon written request of the Contractor, the Contracting Officer shall make an equitable adjustment as provided in paragraph (h) of this clause.

(5) If Government-furnished property is not delivered to the Contractor by the required time or times, the Contracting Officer shall, upon the Contractor's timely written request, make a determination of the delay, if any, caused the Contractor and shall make an equitable adjustment in accordance with paragraph (h) of this clause.

(b) Changes in Government-furnished property.

(1) The Contracting Officer may, by written notice, (i) decrease the Government-furnished property provided or to be provided under this contract or (ii) substitute other Government-furnished property for the property to be provided by the Government or to be acquired by the Contractor for the Government under this contract. The Contractor shall promptly take

such action as the Contracting Officer may direct regarding the removal, shipment, or disposal of the property covered by this notice.

(2) Upon the Contractor's written request, the Contracting Officer shall make an equitable adjustment to the contract in accordance with paragraph (h) of this clause, if the Government has agreed in the Schedule to make such property available for performing this contract and there is any--

- (i) Decrease or substitution in this property pursuant to subparagraph (b)(1) above; or
- (ii) Withdrawal of authority to use property, if provided under any other contract or lease.

(c) Title.

(1) The Government shall retain title to all Government-furnished property.

(2) Title to all property purchased by the Contractor for which the Contractor is entitled to be reimbursed as a direct item of cost under this contract shall pass to and vest in the Government upon the vendor's delivery of such property.

(3) Title to all other property, the cost of which is reimbursable to the Contractor, shall pass to and vest in the Government upon--

- (i) Issuance of the property for use in contract performance;
- (ii) Commencement of processing of the property for use in contract performance; or
- (iii) Reimbursement of the cost of the property by the Government, whichever occurs first.

(4) All Government-furnished property and all property acquired by the Contractor, title to which vests in the Government under this paragraph (collectively referred to as "Government property"), are subject to the provisions of this clause. Title to Government property shall not be affected by its incorporation into or attachment to any property not owned by the Government, nor shall Government property become a fixture or lose its identity as personal property by being attached to any real property.

(d) Use of Government property. The Government property shall be used only for performing this contract, unless otherwise provided in this contract or approved by the Contracting Officer.

(e) Property administration.

(1) The Contractor shall be responsible and accountable for all Government property provided under the contract and shall comply with Federal Acquisition Regulation (FAR) Subpart 45.5, as in effect on the date of this contract.

(2) The Contractor shall establish and maintain a program for the use, maintenance, repair, protection, and preservation of Government property in accordance with sound business practice and the applicable provisions of FAR Subpart 45.5.

(3) If damage occurs to Government property, the risk of which has been assumed by the Government under this contract, the Government shall replace the items or the Contractor shall make such repairs as the Government directs. However, if the Contractor cannot effect such repairs within the time required, the Contractor shall dispose of the property as directed by the Contracting Officer. When any property for which the Government is responsible is replaced or repaired, the Contracting Officer shall make an equitable adjustment in accordance with paragraph (h) of this clause.

(f) Access. The Government and all its designees shall have access at all reasonable times to the premises in which any Government property is located for the purpose of inspecting the Government property.

(g) Limited risk of loss.

(1) The Contractor shall not be liable for loss or destruction of, or damage to, the Government property provided under this contract or for expenses incidental to such loss, destruction, or damage, except as provided in subparagraphs (2) and (3) below.

(2) The Contractor shall be responsible for loss or destruction of, or damage to, the Government property provided under this contract (including expenses incidental to such loss, destruction, or damage)--

(i) That results from a risk expressly required to be insured under this contract, but only to the extent of the insurance required to be purchased and maintained or to the extent of insurance actually purchased and maintained, whichever is greater;

(ii) That results from a risk that is in fact covered by insurance or for which the Contractor is otherwise reimbursed, but only to the extent of such insurance or reimbursement;

(iii) For which the Contractor is otherwise responsible under the express terms of this contract;

(iv) That results from willful misconduct or lack of good faith on the part of the Contractor's managerial personnel; or

(v) That results from a failure on the part of the Contractor, due to willful misconduct or lack of good faith on the part of the Contractor's managerial personnel, to establish and administer a program or system for the control, use, protection, preservation, maintenance, and repair of Government property as required by paragraph (e) of this clause.

(3)(i) If the Contractor fails to act as provided by subdivision (g)(2)(v) above, after being notified (by certified mail addressed to one of the Contractor's managerial personnel) of the Government's disapproval, withdrawal of approval, or nonacceptance of the system or program, it shall be conclusively presumed that such failure was due to willful misconduct



or lack of good faith on the part of the Contractor's managerial personnel.

(ii) In such event, any loss or destruction of, or damage to, the Government property shall be presumed to have resulted from such failure unless the Contractor can establish by clear and convincing evidence that such loss, destruction, or damage--

(A) Did not result from the Contractor's failure to maintain an approved program or system; or

(B) Occurred while an approved program or system was maintained by the Contractor.

(4) If the Contractor transfers Government property to the possession and control of a subcontractor, the transfer shall not affect the liability of the Contractor for loss or destruction of, or damage to, the property as set forth above. However, the Contractor shall require the subcontractor to assume the risk of, and be responsible for, any loss or destruction of, or damage to, the property while in the subcontractor's possession or control, except to the extent that the subcontract, with the advance approval of the Contracting Officer, relieves the subcontractor from such liability. In the absence of such approval, the subcontract shall contain appropriate provisions requiring the return of all Government property in as good condition as when received, except for reasonable wear and tear or for its use in accordance with the provisions of the prime contract.

(5) Upon loss or destruction of, or damage to, Government property provided under this contract, the Contractor shall so notify the Contracting Officer and shall communicate with the loss and salvage organization, if any, designated by the Contracting Officer. With the assistance of any such organization, the Contractor shall take all reasonable action to protect the Government property from further damage, separate the damaged and undamaged Government property, put all the affected Government property in the best possible order, and furnish to the Contracting Officer a statement of--

(i) The lost, destroyed, or damaged Government property;

(ii) The time and origin of the loss, destruction, or damage;

(iii) All known interests in commingled property of which the Government property is a part; and

(iv) The insurance, if any, covering any part of or interest in such commingled property.

(6) The Contractor shall repair, renovate, and take such other action with respect to damaged Government property as the Contracting Officer directs. If the Government property is destroyed or damaged beyond practical repair, or is damaged and so commingled or combined with property of others (including the Contractor's) that separation is impractical, the Contractor may, with the approval of and subject to any conditions imposed by the Contracting Officer, sell such property for the account of the Government. Such sales may be made in order to minimize the loss to the Government, to permit the resumption of business, or to accomplish a similar purpose. The Contractor shall be entitled to an equitable adjustment in the contract price for the expenditures made in performing the obligations under this subparagraph (g)(6) in accordance with paragraph (h) of this clause. However, the Government may directly reimburse the loss and salvage organization for any of their charges. The Contracting Officer shall give due regard to the Contractor's liability under this paragraph (g) when making any such equitable adjustment.

(7) The Contractor shall not be reimbursed for, and shall not include as an item of overhead, the cost of insurance or of any reserve covering risk of loss or destruction of, or damage to, Government property, except to the extent that the Government may have expressly required the Contractor to carry such insurance under another provision of this contract.

(8) In the event the Contractor is reimbursed or otherwise compensated for any loss or destruction of, or damage to, Government property, the Contractor shall use the proceeds to repair, renovate, or replace the lost, destroyed, or damaged Government property or shall otherwise credit the proceeds to, or equitably reimburse, the Government, as directed by the Contracting Officer.

(9) The Contractor shall do nothing to prejudice the Government's rights to recover against third parties for any loss or destruction of, or damage to, Government property. Upon the request of the Contracting Officer, the Contractor shall, at the Government's expense, furnish to the Government all reasonable assistance and cooperation (including the prosecution of suit and the execution of instruments of assignment in favor of the Government) in obtaining recovery. In addition, where a subcontractor has not been relieved from liability for any loss or destruction of, or damage to, Government property, the Contractor shall enforce for the benefit of the Government the liability of the subcontractor for such loss, destruction, or damage.

(h) Equitable adjustment. When this clause specifies an equitable adjustment, it shall be made to any affected contract provision in accordance with the procedures of the Changes clause. When appropriate, the Contracting Officer may initiate an equitable adjustment in favor of the Government. The right to an equitable adjustment shall be the Contractor's exclusive remedy. The Government shall not be liable to suit for breach of contract for--

(1) Any delay in delivery of Government-furnished property;

(2) Delivery of Government-furnished property in a condition not suitable for its intended use;

(3) A decrease in or substitution of Government-furnished property; or

(4) Failure to repair or replace Government property for which the Government is responsible.

(i) Final accounting and disposition of Government property. Upon completing this contract, or at such earlier dates as may be fixed by the Contracting Officer, the Contractor shall submit, in a form acceptable to the Contracting Officer, inventory schedules covering all items of Government property not consumed in performing this contract or delivered to the Government. The Contractor shall prepare for shipment, deliver f.o.b. origin, or dispose of the Government property as may be directed or authorized by the Contracting Officer. The net proceeds of any such disposal shall be credited to the cost of the work covered by this contract or paid to the Government as directed by the Contracting Officer. The foregoing provisions shall apply to scrap from Government property; provided, however, that the Contracting Officer may authorize or direct the Contractor to omit from such inventory schedules any scrap consisting of faulty castings or forgings or of cutting and processing waste, such as chips, cuttings, borings, turnings, short ends, circles, trimmings, clippings, and remnants, and to dispose of such scrap in accordance with the Contractor's normal practice and account for it as a part of general overhead or other reimbursable costs in accordance with the Contractor's established accounting procedures.

(j) Abandonment and restoration of Contractor premises. Unless otherwise provided herein, the Government--

(1) May abandon any Government property in place, at which time all obligations of the Government regarding such abandoned property shall cease; and

(2) Has no obligation to restore or rehabilitate the Contractor's premises under any circumstances (e.g., abandonment, disposition upon completion of need, or contract completion). However, if the Government-furnished property (listed in the Schedule or specifications) is withdrawn or is unsuitable for the intended use, or if other Government property is substituted, then the equitable adjustment under paragraph (h) of this clause may properly include restoration or rehabilitation costs.

(k) Communications. All communications under this clause shall be in writing.

(l) Overseas contracts. If this contract is to be performed outside the United States of America, its territories, or possessions, the words "Government" and "Government-furnished" (wherever they appear in this clause) shall be construed as "United States Government" and "United States Government-furnished," respectively.

## **USE AND CHARGES (APR 1984) (DEVIATION) (FAR 52.245-9)**

(a) Definitions. As used in this clause--

Acquisition cost means the acquisition cost recorded in the Contractor's property control system or, in the absence of such record, the value attributed by the Government to a government property item for purposes of determining a reasonable rental charge.

Government property means property owned or leased by the Government.

Real property means land and rights in land, ground improvements, utility distribution systems, and buildings and other structures. It does not include foundations and other work necessary for installing special tooling, special test equipment, or equipment.

Rental period means the calendar period during which government property is made available for commercial purposes.

Rental time means the number of hours, to the nearest whole hour, rented property is actually used for commercial purposes. It includes time to set up the property for such purposes, perform required maintenance, and restore the property to its condition prior to rental (less normal wear and tear).

(b) General.

(1) Rental requests must be submitted to the administrative Contracting Officer, identify the property for which rental is required, propose a rental period, and calculate an estimated rental charge by using the Contractor's best estimate of rental time in the formulae described in paragraph (c) of this clause.

(2) The Contractor shall not use government property for commercial purposes, including Independent Research and Development, until a rental charge for real property, or estimated rental charge for other property, is agreed upon. Rented property shall be used only on a non-interference basis.

(c) Rental charge.

(1) Real property and associated fixtures.

(i) The Contractor shall obtain, at its expense, a property appraisal from an independent licensed, accredited, or certified appraiser that computes a monthly, daily, or hourly rental rate for comparable commercial property. The appraisal may be used to compute rentals under this clause throughout its effective period or, if an effective period is not stated, in the appraisal, for one year following the date the appraisal was performed. The Contractor shall submit the appraisal to the administrative Contracting Officer at least 30 days prior to the date the property is needed for commercial use. Except as provided in paragraph (c)(l)(iii) of this clause, the administrative Contracting Officer shall use the appraisal rental rate to determine a reasonable rental charge.

(ii) Rental charges shall be determined by multiplying the rental time by the appraisal rental rate expressed as a rate per hour. Monthly or daily appraisal rental rates shall be divided by 720 or 24, respectively, to determine an hourly

rental rate.

(iii) When the administrative Contracting Officer has reason to believe the appraisal rental rate is not reasonable, he or she shall promptly notify the Contractor and provide his or her rationale. The parties may agree on an alternate means for computing a reasonable rental charge.

(2) Other government property. The Contractor may elect to calculate the final rental charge using the appraisal method described in paragraph (c)(1) of this clause subject to the constraints therein or the following formula in which rental time shall be expressed in increments of not less than one hour with portions of hours rounded to the next higher hour--  

$$\text{Rental charge} = \frac{(\text{Rental Time in hours}) (.02 \text{ per month}) (\text{Acquisition Cost})}{720 \text{ hours per month}}$$

(3) Alternate methodology. The Contractor may request consideration of an alternate basis for computing the rental charge if it considers the monthly rental rate or a time-based rental unreasonable or impractical.

(d) Rental payments.

(1) Rent is due at the time and place specified by the Contracting Officer. If a time is not specified, the rental is due 60 days following completion of the rental period. The Contractor shall calculate the rental due, and furnish records or other supporting data in sufficient detail to permit the administrative Contracting Officer to verify the rental time and computation. Unless otherwise permitted by law, payment shall be made by check payable to the Treasurer of the United States and sent to the contract administration office identified in this contract or by electronic funds transfer to that office.

(2) Interest will be charged if payment is not made by the specified payment date or, in the absence of a specified date, the sixty-first day following completion of the rental period. Interest will accrue at the "Renegotiation Board Interest Rate" (published in the Federal Register semiannually on or about January 1st and July 1st) for the period in which the rent is due.

(3) The Government's acceptance of any rental payment under this clause, in whole or in part, shall not be construed as a waiver or relinquishment of any rights it may have against the Contractor stemming from the Contractor's unauthorized use of government property or any other failure to perform this contract according to its terms.

(e) Use revocation. At any time during the rental period, the Government may revoke commercial use authorization and require the Contractor, at the Contractor's expense, to return the property to the Government, restore the property to its per-rental condition (less normal wear and tear), or both.

(f) Unauthorized use. The unauthorized use of government property can subject a person to fines, imprisonment, or both, under 18 U.S.C. 641.

#### **CLAUSES INCORPORATED BY REFERENCE (FEB 1998) (52.252-2)**

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this address: <http://www.arnet.gov/far>

#### **AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984) (FAR 52.252-6)**

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(b) The use in this solicitation or contract of any Defense Federal Acquisition Regulation Supplement (48 CFR Chapter 2) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

#### **DECLARATION OF TECHNICAL DATA CONFORMITY (JAN 1997) (DFARS 252.227-7036)**

All technical data delivered under this contract shall be accompanied by the following written declaration:

The Contractor, \_\_\_\_\_, hereby declares that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. \_\_\_\_\_ is complete, accurate, and complies with all requirements of the contract.

Date \_\_\_\_\_  
 Name and Title of Authorized Official \_\_\_\_\_

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**BEGINNING OF SECTION 'J'**

## SECTION "J" - LIST OF ATTACHMENTS

### Exhibit "A" - Contract Data Requirements Lists (CDRLs):

<u>Description</u>	<u>Date</u>	<u>No. of Pages</u>
CDRL A001 (Software Development Plan)	10 Mar 98	1
CDRL A002 (System/Subsystem Design Description)	10 Mar 98	1
CDRL A003 (System/Subsystem Specification)	10 Mar 98	1
CDRL A004 (Integrated Requirements Specification)	10 Mar 98	1
CDRL A005 (Software Requirements Specification)	10 Mar 98	1
CDRL A006 (Software Users Manual)	10 Mar 98	1
CDRL A007 (Software Design Description)	10 Mar 98	1
CDRL A008 (Software Test Plan)	10 Mar 98	1
CDRL A009 (Software Test Description)	10 Mar 98	1
CDRL A010 (Software Test Report)	10 Mar 98	1
CDRL A011 (Software Test Description)	10 Mar 98	1
CDRL A012 (Software Test Report)	10 Mar 98	1
CDRL A013 (Software Transition Plan)	10 Mar 98	1
CDRL A014 (Software Product Specification)	10 Mar 98	1
CDRL A015 (Software Version Description)	10 Mar 98	1
CDRL A016 (Technical Report – Study/Services)	10 Mar 98	1
CDRL A017 (Product/Asset Configuration Data Information Packet)	10 Mar 98	1
CDRL A018 (Program Plan)	10 Mar 98	1
CDRL A019 (Status Report)	10 Mar 98	1
CDRL A020 (Scientific and Technical Reports)	10 Mar 98	1
CDRL A021 (Interface Design Description)	10 Mar 98	1
CDRL A022 (Presentation Material)	10 Mar 98	1

### Exhibit "B"

### Cost Proposal Worksheets

### Attachments

(1) Data Item Description (DID) DI-IPSC-81427 (Software Development Plan)	05 Dec 94	10
(2) DID DI-IPSC-81432 (System/Subsystem Design Description)	05 Dec 94	8
(3) DID DI-IPSC-81431	05 Dec 94	10
(4) DID DI-IPSC-81434	05 Dec 95	6
(5) DID DI-IPSC-81433	05 Dec 94	10
(6) DID DI-IPSC-81443	05 Dec 94	6
(7) DID DI-IPSC-81435	05 Dec 94	9
(8) DID DI-IPSC-81348	05 Dec 94	6
(9) DID DI-IPSC-81439	05 Dec 94	7
(10) DID DI-IPSC-81440	05 Dec 94	5
(11) DID DI-IPSC-81439	05 Dec 94	7
(12) DID DI-IPSC-81440	05 Dec 94	5
(13) DID DI-IPSC-81429	05 Dec 94	6
(14) DID DI-IPSC-81441	05 Dec 94	5
(15) DID DI-IPSC-81442	05 Dec 94	4
(16) DID DI-IPSC-80508	15 Jan 88	2
(17) DID DI-CMAN-81553	30 Jun 97	1
(18) DID DI-MGMT-80909	06 Oct 89	2
(19) DID DI-MGMT-80368	08 Jun 87	3
(20) DID DI-MISC-80711	02 Dec 88	1
(21) DID DI-IPSC-81436	05 Dec 94	5

(22) DID DI-ADMN-81373	01 Oct 93	1
(23) General DD Form 1423 Glossary	22 Jun 90	8
(24) DD Form 254	10 Feb 98	2
(25) Sample Statement of Work		7

**END OF SECTION "J"****BEGINNING OF SECTION "K"**

## **SECTION "K" - REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS**

- I. FEDERAL ACQUISITION REGULATION (FAR) (48 CFR CHAPTER 1) PROVISIONS  
 II. DEFENSE FAR SUPPLEMENT (DFARS) (48 CFR CHAPTER 2) PROVISIONS

PART I

<u>Title and Date</u>	<u>FAR Subsection</u>
Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions (Apr 1991)	52.203-11

PROVISIONS IN FULL TEXT**CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985) (FAR 52.203-2)**

## (a) The offeror certifies that--

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to (i) those prices, (ii) the intention to submit an offer, or (iii) the methods or factors used to calculate the prices offered;

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

## (b) Each signature on the offer is considered to be a certification by the signatory that the signatory--

(1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above; or

(2)(i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above \_  
 \_\_\_\_\_(insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization);

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above.

(c) If the offeror deletes or modifies subparagraph (a)(2) above, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

**TAXPAYER IDENTIFICATION (JUN 1997) (FAR 52.204-3)**(a) *Definitions.*

"Common parent," as used in this solicitation provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

"Corporate status," as used in this solicitation provision, means a designation as to whether the offeror is a corporate entity, an unincorporated entity (e.g., sole proprietorship or partnership), or a corporation providing medical and health care services.

"Taxpayer Identification Number (TIN)," as used in this solicitation provision, means the number required by the IRS to be used by the offeror in reporting income tax and other returns.

(b) All offerors are required to submit the information required in paragraphs (c) through (e) of this solicitation provision in order to comply with reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M and implementing regulations issued by the Internal Revenue Service (IRS). If the resulting contract is subject to reporting requirements described in FAR 4.903, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

(c) *Taxpayer Identification Number (TIN).*

( ) TIN: \_\_\_\_\_.

( ) TIN has been applied for.

( ) TIN is not required because:

( ) Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the U.S. and does not have an office or place of business or a fiscal paying agent in the U.S.;

( ) Offeror is an agency or instrumentality of a foreign government;

( ) Offeror is an agency or instrumentality of a Federal, state, or local government;

( ) Other. State basis. \_\_\_\_\_.

(d) *Corporate Status.*

( ) Corporation providing medical and health care services, or engaged in the billing and collecting of payments for such services;

( ) Other corporate entity;

( ) Not a corporate entity;

( ) Sole proprietorship;

( ) Partnership;

( ) Hospital or extended care facility described in 26 CFR 501(c)(3) that is exempt from taxation under 26 CFR 501(a).

(e) *Common Parent.*

( ) Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this clause.

( ) Name and TIN of common parent:

Name \_\_\_\_\_

TIN \_\_\_\_\_

#### **WOMEN-OWNED SMALL BUSINESS (OCT 1995) (FAR 52.204-5)**

(a) Representation. The offeror represents that it ( ) is, ( ) is not a women-owned small business concern.

(b) Definition. "Women-owned business concern," as used in this provision, means a concern which is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51% of the stock of which is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

#### **CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (MAR 1996) (FAR 52.209-5)**

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that--

(i) The Offeror and/or any of its Principals--

(A) Are ( ) are not ( ) presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have ( ) have not ( ), within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(C) Are ( ) are not ( ) presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision.

(ii) The Offeror has ( ) has not ( ), within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER SECTION 1001, TITLE 18, UNITED STATES CODE.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

#### TYPE OF BUSINESS ORGANIZATION (OCT 1997) (FAR 52.215-4)

The offeror or responder, by checking the applicable box, represents that --

(a) It operates as ( ) an individual, ( ) a partnership, ( ) a nonprofit organization, ( ) a joint venture, or ( ) a corporation incorporated under the laws of the State of \_\_\_\_\_.

(b) If the offeror or respondent is a foreign entity, it operates as ( ) an individual, ( ) a partnership, ( ) a nonprofit organization, ( ) a joint venture, or ( ) a corporation, registered for business in \_\_\_\_\_ (country).

#### PLACE OF PERFORMANCE (OCT 1997) (FAR 52.215-06)

(a) The offeror or respondent, in the performance of any contract resulting from this solicitation, ( ) intends, ( ) does not intend (check applicable block) to use one or more plants or facilities located at a different address from the address of the offeror or respondent as indicated in this proposal or response to request for information.

(b) If the offeror or respondent checks "intends" in paragraph (a) of this provision, it shall insert in the spaces provided the required information:

Place of Performance (Street, Address,  
City, County, State, Zip Code)

Name and Address of Owner and Operator of the Plant  
or Facility if Other Than Offeror or Respondent

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

#### SMALL BUSINESS PROGRAM REPRESENTATION (FEB 1998) (FAR 52.219-1)

(a)(1) The standard industrial classification (SIC) code for this acquisition is 7371.

(2) The small business size standard is \$18,000,000 in annual revenues.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) Representations.

(1) The offeror represents as part of its offer that it ( ) is, ( ) is not a small business concern.

(2) (Complete only if offeror represented itself as a small business concern in paragraph (b)(1) of this provision.)

The offeror represents as part of its offer that it ( ) is, ( ) is not a small disadvantaged business concern.

(3) (Complete only if offeror represented itself as a small business concern in paragraph (b)(1) of this provision.)

The offeror represents as part of its offer that it ( ) is, ( ) is not a women-owned business concern.

(c) Definitions.

*Joint venture*, for purposes of a small disadvantaged business (SDB) set-aside or price evaluation preference (as prescribed at 13 CFR 124.321), is a concern that is owned and controlled by one or more socially and economically disadvantaged individuals entering into a joint venture agreement with one or more business concerns and is considered to be affiliated for size purposes with such other concern(s). The combined annual receipts or employees of the concerns entering into the joint venture must meet the applicable size standard corresponding to the SIC code designated for contract. The majority of the venture's earnings must accrue directly to the socially and economically disadvantaged individuals in the SDB concern(s) in the joint venture. The percentage of the ownership involvement in a joint venture by disadvantaged individuals must be at least 51 percent.

*Small business concern*, as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121, and the size standard in paragraph (a) of this provision.

*Small disadvantaged business concern*, as used in this provision, means a small business concern that (1) is at least 51 percent unconditionally owned by one or more individuals who are both socially and economically disadvantaged, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one or more socially and economically disadvantaged individuals, and (2) has its management and daily business controlled by one or more such individuals. This term also means a small business concern that is at least 51 percent unconditionally owned by an economically disadvantaged Indian tribe or Native Hawaiian Organization, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one or more of these entities, which has its management and daily business controlled by members of an economically disadvantaged Indian tribe or Native Hawaiian Organization, and which meets the requirements of 13 CFR Part 124.

*Women-owned small business concern*, as used in this provision, means a small business concern--

(1) Which is 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(d) Notice.

(1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small or small disadvantaged business concern in order to obtain a contract to be awarded under the preference programs established pursuant to sections 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition or program eligibility, shall--

(i) Be punished by imposition of fine, imprisonment, or both;

(ii) Be subject to administrative remedies, including suspension and debarment; and

(iii) Be ineligible for participation in programs conducted under the authority of the act.

## **PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (APR 1984) (FAR 52.222-22) (DEVIATION)**

The offeror represents that--

(a) It ( ) has, ( ) has not participated in a previous contract or subcontract subject either to the Equal Opportunity clause of this solicitation,

(b) It ( ) has, ( ) has not, filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

## **AFFIRMATIVE ACTION COMPLIANCE (APR 1984) (FAR 52.222-25)**

The offeror represents that (a) it ( ) has developed and has on file, ( ) has not developed and does not have on file, at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 CFR 60-1 and 60-2), or (b) it ( ) has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

## **CLEAN AIR AND WATER CERTIFICATION (APR 1984) (FAR 52.223-1)**



The Offeror certifies that--

(a) Any facility to be used in the performance of this proposed contract is ( ), is not ( ) listed on the Environmental Protection Agency List of Violating Facilities;

(b) The Offeror will immediately notify the Contracting Officer, before award, of the receipt of any communication from the Administrator, or a designee, of the Environmental Protection Agency, indicating that any facility that the Offeror proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities; and

(c) The Offeror will include a certification substantially the same as this certification, including this paragraph (c), in every nonexempt subcontract.

#### **CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING (OCT 1996) (FAR 52.223-13)**

(a) Submission of this certification is a prerequisite for making or entering into this contract imposed by Executive Order 12969, August 8, 1995.

(b) By signing this offer, the offeror certifies that--

(1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

(2) None of its owned and operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons: (*Check each block that is applicable.*)

☐ (i) The facility does not manufacture, process, or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

☐ (ii) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023 (b)(1)(A);

☐ (iii) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

☐ (iv) The facility does not fall within Standard Industrial Certification Code (SIC) designations 20 through 39 as set forth in section 19.102 of the Federal Acquisition Regulations; or

☐ (v) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

#### **DISCLOSURE OF OWNERSHIP OR CONTROL BY THE GOVERNMENT OF A TERRORIST COUNTRY (SEP 1994) (DFARS 252.209-7001)**

(a) *Definitions.* As used in this provision --

(1) "Government of a terrorist country" includes the state and the government of a terrorist country, as well as any political subdivision, agency, or instrumentality thereof.

(2) "Terrorist country" means a country determined by the Secretary of State, under section 6(j)(1)(A) of the Export Administration Act of 1979 (50 U.S.C. App. 2405(j)(i)(A)), to be a country the government of which has repeatedly provided support for acts of international terrorism. As of the date of this provision, terrorist countries include: Cuba, Iran, Iraq, Libya, North Korea, Sudan, and Syria.

(3) "Significant interest" means --

(i) Ownership of or beneficial interest in five percent or more of the firm's or subsidiary's securities. Beneficial interest includes holding five percent or more of any class of the firm's securities in "nominee shares", "street names," or some other method of holding securities that does not disclose the beneficial owner;

(ii) Holding a management position in the firm such as director or officer;

(iii) Ability to control or influence the election, appointment, or tenure of directors or officers of the firm;

(iv) Ownership of ten percent or more of the assets of a firm such as equipment, buildings, real estate, or other tangible assets of the firm; or

(v) Holding fifty percent or more of the indebtedness of a firm.

(b) *Prohibition on award.* In accordance with 10 U.S.C. 2327, no contract may be awarded to a firm or a subsidiary of a firm if the government of a terrorist country has a significant interest in the firm or subsidiary, unless a waiver is granted by

the Secretary of Defense.

(c) *Disclosure.* If the government of a terrorist country has a significant interest in the Offeror or a subsidiary of the Offeror, the Offeror shall disclose such interest in an attachment to its offer. If the Offeror is a subsidiary, it shall also disclose any significant interest the government of a terrorist country has in any firm that owns or controls the subsidiary. The disclosure shall include--(1) Identification of each government holding a significant interest; and (2) A description of the significant interest held by each government.

**SMALL DISADVANTAGED BUSINESS CONCERN REPRESENTATION (DoD CONTRACTS)(JUN 1997)  
(DFARS 252.219-7000)**

(a) *Definition.* "Small disadvantaged business concern", as used in this provision, means a small business concern, owned and controlled by individuals who are both socially and economically disadvantaged, as defined by the Small Business Administration at 13 CFR Part 124, the majority of earnings of which directly accrue to such individuals. This term also means a small business concern owned and controlled by an economically disadvantaged Indian tribe or Native Hawaiian Organization which meets the requirements of 13 CFR 124.112 or 13 CFR 124.113, respectively. In general, 13 CFR Part 124 describes a small disadvantaged business concern as a small business concern--

(1) Which is at least 51 percent unconditionally owned by one or more socially and economically disadvantaged individuals; or

(2) In the case of any publicly owned business, at least 51 percent of the voting stock is unconditionally owned by one or more socially and economically disadvantaged individuals; and

(3) Whose management and daily business operations are controlled by one or more such individuals.

(b) *Representations.* Check the category in which your ownership falls:

- ☐ Subcontinent Asian (Asian-Indian) American (U.S. Citizen with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives islands, or Nepal)
- ☐ Asian-Pacific American (U.S. Citizen with origins from Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, U.S. Trust Territory of the Pacific Islands (Republic of Palau), the Northern Mariana Islands, Laos, Kampuchea (Cambodia), Taiwan, Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Republic of the Marshall Islands, the Federated States of Micronesia, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru)
- ☐ Black American (U.S. Citizen)
- ☐ Hispanic American (U.S. Citizen with origins from South America, Central America, Mexico, Cuba, the Dominican Republic, Puerto Rico, Spain, or Portugal)
- ☐ Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians, including Indian tribes or Native Hawaiian Organizations)
- ☐ Individual/concern, other than one of the preceding, currently certified for participation in the Minority Small Business and Capital Ownership Development Program under Section 8(a) of the Small Business Act
- ☐ Other

(c) Complete the following--

(1) The offeror is \_\_\_ is not \_\_\_ a small disadvantaged business concern.

(2) The Small Business Administration (SBA) has \_\_\_ has not \_\_\_ made a determination concerning the offeror's status as a small disadvantaged business concern. If the SBA has made a determination, the date of the determination was \_\_\_ and the Offeror--

- ☐ Was found by SBA to be socially and economically disadvantaged and no circumstances have changed to vary that determination.
- ☐ Was found by the SBA not to be socially and economically disadvantaged but circumstances which caused the determination have changed.

(d) *Penalties and Remedies.*

Anyone who misrepresents the status of a concern as a small business for the purpose of securing a contract or subcontract shall--

- (1) Be punished by imposition of a fine, imprisonment, or both;
- (2) Be subject to administrative remedies, including suspension and disbarment; and
- (3) Be ineligible for participation in programs conducted under authority of the Small Business Act.

**CONTRACTOR PERFORMANCE DATA (OCT 1995) (NAVSUP)** Note: Past performance information is already required within the "Past Performance" portion of the Technical Proposal. The information requested in this provision may be provided within the technical proposal or in addition to the pages allowed in the technical proposal.

The offeror shall demonstrate past performance through completion of the "Contractor Performance Data Sheet". The Contractor Performance Data Sheet shall be completed in its entirety. Data other than that requested on the Contractor Performance Data Sheet will not be considered. Additionally, offerors are urged to submit brief and concise responses, within the confines of the space allotted. *Failure to submit the completed Contractor Performance Data Sheet (along with the proposal) shall be considered certification (by signature on the proposal) that the contractor has no past performance for like or similar items for the Government to evaluate.*

### CONTRACTOR PERFORMANCE DATA SHEET

NOTE: THE INFORMATION PROVIDED MAY BE USED TO EVALUATE THE OFFEROR'S PAST PERFORMANCE IN MEETING COSTS/PRICE, TECHNICAL, AND DELIVERY OBJECTIVES. POINTS OF CONTACT PROVIDED MAY BE CONTACTED TO CONFIRM INFORMATION PROVIDED AND TO GATHER INFORMATION ON TECHNICAL PERFORMANCE, QUALITY, LIFE CYCLE COST AND/OR RELIABILITY. THE RESULTS MAY BE USED IN THE OVERALL COMPARATIVE EVALUATION OF THE OFFERORS IN ACCORDANCE WITH SECTION M OF THIS REQUEST FOR PROPOSAL.

List Performance Data on your five most recently completed Federal Government contracts (not to exceed three years since completion) for like or similar items under this RFP. (If you do not have five Federal Government contracts, then list state, local, or commercial contracts, in that order, to complete this report)

Contractor Name: RFP #:  
Address: POC: (Person who can verify data)  
Telephone:  
Division: FAX:

#### CONTRACT INFORMATION

Contract Number: Date Completed:  
Contract Type: Fixed Price Cost Reimbursement Other (Specify)  
Item Description:  
Contract Quantity/Length of Service:  
Customer Name: Customer POC: (Person who can verify data)  
Address: Telephone:  
FAX:

#### QUALITY

NOTE: An explanation must accompany all answers with an asterisk(\*).

Was consideration or a monetary withhold for non-conforming supplies/services or late deliveries assessed against this contract? YES\* \_\_\_\_ NO \_\_\_\_ (Explanation)

Was/is any part of this contract terminated for default and/or litigation?  
YES\* \_\_\_\_ NO \_\_\_\_ (Explanation)

Was any warranty work completed on delivered items?

YES\* \_\_\_\_ NO \_\_\_\_ (Explanation)

Did you receive any quality awards in the past three years?

YES\* \_\_\_\_ NO \_\_\_\_ (List Awards)

#### TIMELINESS

Were all items (including products, services, reports, etc.) delivered within the original contract schedule?

YES \_\_\_\_ NO \* \_\_\_\_ (Explanation)

#### COST

FOR COST TYPE CONTRACTS:

Was the original contract estimated cost met? YES \_\_\_\_ NO\* \_\_\_\_  
(Explanation)

If the estimated cost was not met, what was the positive/negative percentage of change?

+\_\_\_\_\_-\_\_\_\_

#### OTHER PERTINENT INFORMATION

Describe any corrective action(s) initiated to solve any of the above-described problems/deficiencies on this contract.

Discuss the success of the corrective action(s) taken.

**END OF SECTION "K"**

## BEGINNING OF SECTION 'L'

### SECTION "L" - INSTRUCTIONS, CONDITIONS AND NOTICES TO OFFERORS

#### PART I

<u>Title and Date</u>	<u>FAR Subsection</u>
Instructions to Offerors-Competitive Acquisition (Oct 1997)	52.215-01
Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data (Oct 1997)	52.215-20

#### PART II

<u>Title and Date</u>	<u>DFARS Subsection</u>
Commercial and Government Entity (CAGE) Code Reporting (Dec 1991)	252.204-7001
Certificate of Competency (Apr 1993)	252.219-7009
Identification and Assertion of Use, Release or Disclosure Restrictions (Jun 1995)	252.227-7017
Technical Data or Computer Software Previously Delivered to the Government (Jun 1995)	252.227-7028

#### PROVISIONS IN FULL TEXT

#### **DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER (APR 1998) (FAR 52.204-6)**

(a) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" followed by the DUNS number that identifies the offeror's name and address exactly as stated in the offer. The DUNS number is a nine-digit number assigned by Dun and Bradstreet Information Services.

(b) Contractor identification is essential for complying with statutory contract reporting requirements. Therefore, the offeror is requested to enter, in the block with its name and address on the Standard Form 33 or similar document, the annotation "DUNS" followed by the DUNS number which identifies the offeror's name and address exactly as stated in the offer. For information on obtaining a DUNS number, the offeror, if located within the United States, should call Dun and Bradstreet at 1-800-33-0505. The offeror should be prepared to provide the following information:

- (1) Company name.
- (2) Company address.
- (3) Company telephone number.
- (4) Line of business.
- (5) Chief executive officer/key manager.
- (6) Date the company was started.
- (7) Number of people employed by the company.
- (8) Company affiliation.

(c) Offerors located outside the United States may obtain the location and phone number of the local Dun and Bradstreet Information Services office from the Internet Home Page at <http://www.dnb.com/>. If an offeror is unable to locate a local service center, it may send an e-mail to Dun and Bradstreet at [globalinfo@dbisma.com](mailto:globalinfo@dbisma.com).

#### **NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE USE (FAR 52.211-14) (SEP 1990)**

Any contract awarded as a result of this solicitation will be ( ☐ ) DX rated order; ( ☒ ) DO rated order certified for national defense use under the Defense Priorities and Allocations System (DPAS) (15 CFR 700), and the Contractor will be required to follow all of the requirements of this regulation. [Contracting Officer check appropriate box.]

#### **TYPE OF CONTRACT (APR 1984) (FAR 52.216-1)**

The Government contemplates award of an indefinite-delivery, requirements type contract resulting from this solicitation.

Note: The Government anticipates awarding a contract that will allow for placement of DOs on fixed price, cost-plus-fixed-fee, and cost-plus-incentive-fee pricing arrangements, depending on the exact nature of the particular requirement.

#### **PREAWARD ON-SITE EQUAL OPPORTUNITY COMPLIANCE EVALUATION (APR 1984) (52.222-24) (DEVIATION)**

An award in the amount of \$10 million or more will not be made under this solicitation unless the offeror and each of its

known first-tier subcontractors (to whom it intends to award a subcontract of \$10 million or more) are found, on the basis of a compliance evaluation, to be able to comply with the provision of the Equal Opportunity clause of this solicitation. If the offeror's proposal is for a contract of \$10 million or more, of the offeror and its known first-tier subcontractors to whom the offeror intends to award a subcontract of \$10 million or more shall be subject to a compliance evaluation, unless within the preceding 24 months the Office of Federal Contract Compliance Clearance has conducted a compliance evaluation and found them to be in compliance with Executive Order 11246.

#### **SERVICE OF PROTEST (AUG 1996) (FAR 52.233-2)**

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO) shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from Contracting Officer, Code 1164, NAVSURFWARCENDIV, 300 Highway 361, Crane, IN 47522-5011.

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

#### **SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998) (FAR 52.252-1)**

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address: <http://www.arnet.gov/far>

#### **FACILITY SECURITY CLEARANCE (NAVSEA) (SEP 1990)**

(a) No award will be made to any offeror that does not possess a facility security clearance issued by the Defense Investigative Service at the level. Naval Surface Warfare Center, Crane Division will initiate appropriate security clearance action for any apparent successful offeror which does not already possess such clearance. The Government is not obligated to delay award pending security clearance of any offeror.

(b) The security classification of this procurement is specified in the Contract Security Classification Specification, DD Form 254, attached hereto.

#### **NOTIFICATION OF POTENTIAL ORGANIZATIONAL CONFLICT(S) OF INTEREST (NAVSEA) (JUN 1994)**

(a) Offerors are reminded that certain existing contractual arrangements may preclude, restrict or limit participation, in whole or in part, as either a subcontractor or as a prime contractor under this competitive procurement. Of primary concern are those contractual arrangements in which the Offeror provides support to N/A, or related laboratories (if applicable), in support of operation of the office or any of its programs. General guidance may be found in FAR 9.505; however, this guidance is not all inclusive. The Offeror's attention is directed to the "Organizational Conflict of Interest" (or similar) requirement which may be contained in current or completed contract(s) which prohibits the prime or subcontractor from providing certain supplies or services to the Government as described above during the period of the current "support" contract(s) or for a period after completion of the "support" contract(s). Notwithstanding the existence or non-existence of an Organizational Conflict of Interest (OCI) clause or similar requirement in current or completed contract(s), the offeror shall comply with FAR 9.5 and identify whether an OCI exists and not rely solely on the presence of an OCI requirement.

(b) If a potential conflict of interest exists at any tier, each potential prime offeror is requested to notify the Contracting Officer within 14 days of the date of this solicitation. The Offeror shall provide: (1) the contract number and name and phone number of the Contracting Officer for the contract which gives rise to a potential organizational conflict of interest; (2) a copy of the requirement; (3) the statement of work (or technical instruction) from the existing contract; (4) a brief description of the type of work to be performed by each subcontractor under the competitive procurement; and (5) any additional information the Contracting Officer should consider in making a determination of whether a conflict of interest exists. The Government may independently verify the information received from the offeror. Notwithstanding the above, the Government reserves the right to determine whether a conflict of interest exists based on any information received from any source.

(c) The Government will notify an offeror of any conflict of interest within 14 days of receipt of all required information. Those offerors deemed to have a conflict of interest may be ineligible for award. Failure to provide the information in a timely manner does not waive the Government's rights to make a conflict of interest determination. The

offeror is notified that if it expends time and money on proposal preparation, such expenditure is at its own risk that the Government will not determine that an organizational conflict of interest exists.

(d) Any potential prime contractor that proposes a subcontractor later determined to have a conflict of interest and deemed ineligible to participate in the current competition, may not be granted the opportunity to revise its proposal to remove the ineligible subcontractor. The Government reserves the right to determine which offerors remain in the competitive range through the normal source selection process.

(e) If the offeror determines that a potential organizational conflict of interest does not exist at any tier, the offeror shall include a statement to that effect in its response to this solicitation.

#### **REQUIREMENTS CONCERNING WORK WEEK (MAY 1993)**

(a) Uncompensated effort is defined as hours provided by personnel in excess of 40 hours per week without additional compensation for such excess work.

(b) The offeror may include uncompensated effort in its proposed level of effort if:

(1) The offeror has an established cost accounting system, approved by the Defense Contract Audit Agency, which records all hours worked, including uncompensated hours, for all employees, and regardless of contract type.

(2) Uncompensated hours, for all employees and regardless of contract type, are included in the offeror's base for allocation of overhead costs.

(3) The proposal identifies hours of uncompensated effort proposed by labor category.

(4) The proposal identifies the amount of uncompensated effort that will be performed without supervision and without support personnel and assesses the productivity of such effort.

(5) The proposal describes the extent to which employees are required or encouraged to perform uncompensated effort and the impact the use of uncompensated effort has on work effectiveness.

(6) The proposal includes a copy of the corporate policy addressing uncompensated effort.

(c) The above information must be provided for each subcontract which has uncompensated effort included in the proposed level of effort.

(d) Any proposal which includes uncompensated effort in the proposed level of effort not in compliance with the above may be rejected.

#### **ALTERNATE PROPOSALS (JAN 1992) (NAVSUP)**

Offers may submit more than one proposal, each of which must satisfy the mandatory requirements of the solicitation, including any Benchmark Tests, in order to be considered. As a minimum, one of the proposals submitted must be complete. The alternate proposal(s) may be in an abbreviated form following the same section format, but providing only those sections that differ in any way from those contained in the original proposal. Each proposal will include cost tables indicating the complete range of pricing options. In the case of price/cost options for a given configuration, an alternate proposal will not be required. If alternate proposals are submitted, such alternatives will be clearly labeled and identified on the cover page of each separate document. The reason for each alternate and its comparative benefits shall be explained. Each proposal submitted will be evaluated on its own merits.

#### **BLANKET EXEMPTION CERTIFICATE**

In accordance with the provisions of Section 39(a) and Section 6 of the Indiana Gross Income Tax Act of 1933, Crane Division, Naval Surface Warfare Center, Crane, Indiana, is specifically exempt as a Government activity from any payment of sales and use tax has been assigned Exemption Certificate Number 0018103400015.

#### **BUSINESS HOURS**

Crane Division, Naval Surface Warfare Center, Crane, Indiana, allows flexible working hours for its employees. The normal eight-hour shift may be worked between the hours of 6:30 AM and 5:30 PM EST. Many of our employees work 6:30 AM to 3:00 PM as a regular practice. The core time, when all employees are scheduled to work, is 9:00 AM to 3:00 PM.

#### **END OF SECTION 'L'**

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#### **BEGINNING OF SECTION 'M'**

### **SECTION "M" - EVALUATION FACTORS FOR AWARD**

## PART I

Title and Date  
Evaluation of Options (Jul 1990)

FAR Subsection  
52.217-05

### PROVISIONS IN FULL TEXT

#### **GREATEST VALUE EVALUATION (JAN 1992) (NAVSUP)**

(a) The contract resulting from this solicitation will be awarded to that responsible offeror whose offer, conforming to the solicitation, is determined most advantageous to the Government, cost/price and other factors considered. The offeror's proposal shall be in the form prescribed by this solicitation and shall contain a response to each of the areas identified which affects the evaluation factors for award.

EVALUATION FACTORS – Listed in descending order of importance. The importance of cost will increase as the differences in the other factors diminish.

Technical Approach  
Past Performance  
Personnel  
Facilities  
Cost  
Subcontracting

(b) Although cost and subcontracting are not weighted evaluation factors, they will not be ignored. The degree of importance of these factors will increase with the degree of equality of the proposals in relation to the other factors on which selection is to be based.

(c) In evaluating cost type offers, realism of the offeror's estimated cost will be considered. "Realism of Estimated Cost" is determined by reference to the costs which the offeror can reasonably be expected to incur in performance of the contract in accordance with his offer. Unrealistic personnel compensation rates will be considered in the cost realism analysis and may be considered in the technical analysis which could reduce the technical score.

(d) The Government may award a contract on the basis of initial offers received, without discussions. Therefore, each initial offer should contain the offeror's best terms from a cost or price and technical standpoint. However, if considered necessary by the contracting officer, discussions will be conducted with only those offerors determined to have a reasonable chance for award.

(e) The Government reserves the right to make an award to other than the lowest priced offeror or to the offeror with the highest technical score if the Contracting Officer determines that to do so would result in the greatest value to the Government.

#### **ADDITIONAL SOURCE SELECTION INFORMATION**

##### **A. TECHNICAL FACTORS**

**1. Technical Approach.** The proposal will be evaluated on how well its technical approach on the sample DO supports the needs, program objectives, program description, and program scope. The Source Selection Evaluation Board (SSEB) will evaluate this by utilizing the following subfactors (a) through (d) as they relate to the sample DO:

(a) Realism of Labor: The kinds and quantities of labor proposed to successfully perform the offeror's technical approach will be evaluated (i.e., realism relative to labor categories and hours), as well as the reasonableness of the kinds and quantities of labor. The evaluation will consider the labor mix that is proposed for the sample DO and the degree to which the labor mix correlates to sections 3 and 4 below.

(b) Software Architecture: The evaluation will consider the architecture of the software and the degree to which the proposal outlines the top level design of the proposed software using standard diagrams such as process diagrams. The proposal must address how the software will be designed to maximize re-use. Sample source code of re-usable components shall be included. The discussion of how future upgrades and enhancements will impact the architecture will also be evaluated.

(c) Commercial-Off-The-Shelf (COTS) Software: The evaluation will consider the amount of COTS software

used in the proposal. The proposal must indicate the percentage of COTS software that will be used and list possible candidates. The proposal must also include how the COTS will be evaluated.

(d) **Licensing and Proprietary Issues:** The evaluation will consider licensing and proprietary issues. A major concern relative to this procurement is how to prevent licensing and other proprietary issues from hampering the potential of this product to be expanded and upgraded to support new missions. Examples of unfavorable situations would include the use of COTS software that does not allow Government access to the source code or the incorporation of non-standard and/or proprietary interfaces. The proposal must address the licensing associated with any COTS used and discuss how it will impact the future expandability of the product. The licensing costs associated with fielding the product must also be discussed.

A maximum of 12 typewritten, single spaced 8.5" by 11" pages for the sample DO, not including drawings and sketches, will be evaluated. Drawings and sketches may be provided as exhibits or attachments to the technical proposal. If an offeror submits pages in excess of 12 for the sample DO, the first 12 pages will be reviewed by the Government and the remaining pages will not be considered.

**2. Past Performance.** Offerors must provide evidence of capabilities and related experience in reference to the proposed technology in support of the program. In the past performance information, offerors will discuss same/similar experience performed for the Government or commercial customers and completed within the past three years, the performance periods, and details of the work performed. Corporate experience, gained within the past three years, will be evaluated with emphasis on the programs and skills relating to the program objectives. This experience must demonstrate knowledge and ability to perform the objectives of the program. Significant achievements and technological advancements must be demonstrated. Offerors will also be required to list names and phone numbers of customers who can attest to the accuracy of the past performance information submitted, so that the Government may perform its own independent evaluation of each offeror's past performance. Offerors will be afforded to opportunity to respond to negative comments on the part of former customers.

The evaluation of past performance will include an analysis to ascertain the degree to which each offeror has maintained adequate cost controls while performing similar type efforts. This will help lead to an objective risk assessment by the Government in considering whether the proposed costs are realistic, and whether the offeror has historically maintained reasonable cost controls when performing similar efforts.

A maximum of 15 typewritten 8.5" by 11" pages will be evaluated. If an offeror submits pages in excess of 15, the Government will review the first 15 pages and the remaining pages will not be considered.

**3. Personnel.** The offeror will be evaluated on the quality of "key" personnel proposed for performance under this contract. Education and experience levels in related fields pertaining to the program objectives of key personnel will be of utmost importance. Resumes will be required of the top technical personnel involved in this project. Offerors will be required to list significant accomplishments of the key personnel being proposed, including any inventions, patents, and/or articles that have been authored by those individuals and published in technical journals. The Government considers there to be a quantity of four "key" personnel. It is anticipated one of the key personnel would have cognizance and expertise in the display technology, one for the server technology, one as an integrator, and one as a program manager.

The proposal must also discuss possible teaming agreements with other organizations both in industry and in Government. The benefits of these agreements must be discussed with emphasis placed on the value these organizations can add to the effort.

Resumes for all "key" personnel must be provided. A maximum of two typewritten 8.5" by 11" pages may supplement each resume detailing related experience, publications within the last 3 years, professional affiliations, and other relevant information.

**4. Facilities.** Facilities proposed will be evaluated as to effectiveness of supporting the requirements specified in the program objectives. The facilities shall support the security requirements that come with generating and accessing SECRET data. A list of simulators, stimulators, sniffers and other test equipment available to the company shall also be included in the proposal. A diagram shall be included showing what type and how many platforms will be used to support development, internal testing, external testing, the Configuration Management (CM) repository, and the status accounting web site.



A maximum of 5 typewritten 8.5" by 11" pages, not including drawings and sketches, will be evaluated. Drawings and sketches may be provided as exhibits or attachments in addition to the 5 typewritten pages of facilities information. If an offeror submits pages in excess of 5 pages, the Government will review the first 5 pages and the remaining pages will not be considered.

Technical approach and past performance are equally important. Both are more important than personnel. The personnel factor is more important than facilities.

## **B. COST FACTOR**

Cost will not be weighted. Cost will become more important as a factor if the technical evaluation scores are not substantially different. Cost may be the deciding factor for selection, depending upon whether a substantially higher rated technical proposal warrants the evaluated cost premium.

The realism and reasonableness of cost proposals will also be evaluated. "Cost Realism" may be determined, in part, by reference to the costs which, under FAR 31.201-3, the offeror can reasonably be expected to incur in the performance of this effort. Congruence between the technical and cost proposals will also be utilized to determine the realism of proposed costs.

## **C. SUBCONTRACTING**

Subcontracting will not be weighted. The offeror's proposed subcontracting effort will be evaluated, however, to ensure compliance with all statutory and regulatory requirements relating to the Government's socio-economic procurement-related policies.

## **GOVERNMENT EVALUATED PRICE**

On the basis of the Government's Cost Realism analyses, offerors' proposed prices may be adjusted to reflect the costs that the Government reasonably expects to be incurred in contract performance. Adjustments may be made to direct and indirect costs proposed, as applicable, in order to make the best value award determination.

## **PAST PERFORMANCE**

During the source selection process, the Government will assess the offeror's past performance in the evaluation for contract award. Accordingly, each offeror is required to submit a list of its five most recent contracts for the same or similar items. It is preferred that these contracts be with U.S. government customers, but contracts with other commercial concerns are also acceptable. **Offerors are authorized to provide information relative to any problems encountered on the identified contracts and any corrective actions taken by the offeror.** The Source Selection Authority (SSA)/Contracting Officer will evaluate the offeror's past performance; based upon the information furnished by the offeror, or other information obtained by the Contracting Officer. The Contracting Officer is not responsible for locating or securing any information not identified in the offer. The SSA/Contracting Officer may, however, utilize all available information, including information not provided by the offeror, in the past performance evaluation.

Past performance is assessed by the SSA/Contracting Officer and is assigned a narrative rating in the evaluation. Each offeror will be given an adjectival rating on past performance: highly favorable, favorable, unfavorable, or highly unfavorable. Offerors who do not have same or similar past performance information reasonably available to the Contracting Officer will be rated neither favorably nor unfavorably.

Offerors without corporate past performance history are encouraged to submit past performance information, or key personnel data, previous subcontracting experience, etc. for the Government to evaluate.

In the event there are substantial differences among the offerors in terms of past performance, the Government reserves the right to award to other than the lowest priced offer in favor of an offeror with substantially better performance history. In addition, the Government may accept other than the lowest priced offer if doing so would result in greater value to the Government in terms of technical performance, quality, reliability, life cycle cost, or lower overall program risk. As a part of the past performance evaluation, the Government will assess the offeror's previous compliance with the requirements of FAR 52.219-8 and 52.219-9 as applicable. Small disadvantaged business concerns may receive evaluation preference as provided elsewhere in this solicitation.

## **EVALUATION – ADDITIONAL INFORMATION**

Although the resultant contract will allow for the award of fixed-price delivery orders, fixed-price-level-of-effort delivery orders, cost-plus-incentive-fee delivery orders, and cost-plus-fixed-fee delivery orders, for purposes of proposing and evaluating offers, the Sample DOs shall be considered to be a cost-plus-fixed-fee effort.

However, within Exhibit B, offerors shall propose loaded labor rates for each labor category that will be applicable to fixed-price-level-of-effort DOs. The Government will evaluate the loaded labor rates for price reasonableness. Should the need arise to place fixed-price delivery orders or cost-plus-incentive-fee delivery orders, the profit/fee arrangement will be negotiated on the individual DOs. Covering the base period and all option periods Exhibit “B” will also, for evaluation purposes, consider all DOs to be cost-plus-fixed-fee type orders. The basis for this is that the Government anticipates that the majority of Dos to be issued under the resultant contract will be cost-plus-fixed-fee.

**END OF SECTION ‘M’**

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<b>D. SYSTEM / ITEM</b> USMC CEC			<b>E. CONTRACT / PR NO.</b>		<b>F. CONTRACTOR</b>					
<b>1. DATA ITEM NO.</b>  A001	<b>2. TITLE OF DATA ITEM</b>  SOFTWARE DEVELOPMENT PLAN				<b>3. SUBTITLE</b>					
<b>4. AUTHORITY (Data acquisition Document No.)</b>  DI-IPSC-81427			<b>5. CONTRACT REFERENCE</b> SOW Para. 3.1, 3.1.1, 3.1.1.2, 3.1.6.1, 3.1.9, 3.1.11, 3.1.12		<b>6. REQUIRING OFFICE</b> Identified in Delivery Orders					
<b>7. DD 250 REQ</b> SEE BLK 16	<b>9. DIST STATEMENT REQUIRED</b>  SEE BLK 16	<b>10. FREQUENCY</b> SEE BLK 16	<b>12. DATE OF FIRST SUBMISSION</b> SEE BLK 16	<b>14. DISTRIBUTION</b> SEE BLK 16						
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17. PRICE GROUP

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<b>D. SYSTEM / ITEM</b> USMC CEC			<b>E. CONTRACT / PR NO.</b>		<b>F. CONTRACTOR</b>									
<b>1. DATA ITEM NO.</b>  A002	<b>2. TITLE OF DATA ITEM</b>  SYSTEM/SUBSYSTEM DESIGN DESCRIPTION				<b>3. SUBTITLE</b>  SSDD INFORMATION									
<b>5. AUTHORITY (Data acquisition Document No.)</b>  DI-IPSC-81432			<b>5. CONTRACT REFERENCE</b> SOW Para. 3.1.1.2, 3.1.3.1			<b>6. REQUIRING OFFICE</b> Identified in Delivery Orders								
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<b>1. DATA ITEM NO.</b>  A003	<b>2. TITLE OF DATA ITEM</b>  SYSTEM/SUBSYSTEM SPECIFICATION (SSS)				<b>3. SUBTITLE</b>  SSS INFORMATION					
<b>6. AUTHORITY (Data acquisition Document No.)</b>  DI-IPSC-81431			<b>5. CONTRACT REFERENCE</b> SOW Para. 3.1.2.1			<b>6. REQUIRING OFFICE</b> Identified in Delivery Orders				
<b>7. DD 250 REQ</b>  SEE BLK 16	<b>9. DIST STATEMENT REQUIRED</b>  SEE BLK 16	<b>10. FREQUENCY</b>  AS REQ		<b>12. DATE OF FIRST SUBMISSION</b> SEE BLK 16		<b>14. DISTRIBUTION</b>  SEE BLK 16				
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<b>1. DATA ITEM NO.</b>  A004	<b>2. TITLE OF DATA ITEM</b>  INTEGRATED REQUIREMENTS SPECIFICATION (IRS)				<b>3. SUBTITLE</b>  IRS INFORMATION				
<b>7. AUTHORITY (Data acquisition Document No.)</b>  DI-IPSC-81434			<b>5. CONTRACT REFERENCE</b> SOW Para. 3.1.2.1, 3.1.2.2		<b>6. REQUIRING OFFICE</b> Identified in Delivery Orders				
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D. SYSTEM / ITEM USMC CEC			E. CONTRACT / PR NO.		F. CONTRACTOR							
1. DATA ITEM NO.  A005	2. TITLE OF DATA ITEM  SOFTWARE REQUIREMENTS SPECIFICATION (SRS)			3. SUBTITLE  SRS INFORMATION								
8. AUTHORITY ( <i>Data acquisition Document No.</i> )  DI-IPSC-81433		5. CONTRACT REFERENCE SOW Para. 3.1.2.1		6. REQUIRING OFFICE Identified in Delivery Orders								
7. DD 250 REQ  SEE BLK 16	9. DIST STATEMENT REQUIRED  SEE BLK 16	10. FREQUENCY  AS REQ	12. DATE OF FIRST SUBMISSION SEE BLK 16	14. DISTRIBUTION SEE BLK 16								
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<b>D. SYSTEM / ITEM</b> USMC CEC			<b>E. CONTRACT / PR NO.</b>		<b>F. CONTRACTOR</b>									
<b>1. DATA ITEM NO.</b>  A006		<b>2. TITLE OF DATA ITEM</b>  SOFTWARE USERS MANUAL			<b>3. SUBTITLE</b>									
<b>9. AUTHORITY (Data acquisition Document No.)</b>  DI-IPSC-81443			<b>5. CONTRACT REFERENCE</b> SOW Para. 3.1.2.3		<b>6. REQUIRING OFFICE</b> Identified in Delivery Orders									
<b>7. DD 250 REQ</b> SEE BLK 16	<b>9. DIST STATEMENT REQUIRED</b>  SEE BLK 16	<b>10. FREQUENCY</b> AS REQ		<b>12. DATE OF FIRST SUBMISSION</b> SEE BLK 16		<b>14. DISTRIBUTION</b> SEE BLK 16								
<b>8. APP CODE</b>  A		<b>11. AS OF DATE</b>		<b>13. DATE OF SUBSEQUENT SUBMISSION</b> 20DARC		<b>a. ADDRESSEE</b> SEE BLK 16 <table border="1"> <tr> <td colspan="2"><b>b. COPIES</b></td> </tr> <tr> <td><b>DRAF</b></td> <td><b>FINAL</b></td> </tr> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</td> </tr> </table>		<b>b. COPIES</b>		<b>DRAF</b>	<b>FINAL</b>	1	0	0
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<b>DRAF</b>	<b>FINAL</b>													
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						<b>G. PREPARED BY</b>			<b>H. DATE</b>		<b>I. APPROVED BY</b>		<b>J. DATE</b>	

<b>17. PRICE GROUP</b>
<b>18. ESTIMATE TOTAL PRICE</b>

<b>CONTRACT DATA REQUIREMENTS LIST</b> (1 Data Item)	<b>Form Approved</b>  OMB No. 0704-0188
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A. CONTRACT LINE ITEM NO.		B. EXH/ATCH NO.		C. CATEGORY TDP _____ TM _____ OTHER _____										
D. SYSTEM / ITEM USMC CEC			E. CONTRACT / PR NO.		F. CONTRACTOR									
1. DATA ITEM NO.  A007	2. TITLE OF DATA ITEM  SOFTWARE DESIGN DESCRIPTION			3. SUBTITLE										
10. AUTHORITY ( <i>Data acquisition Document No.</i> )  DI-IPSC-81435		5. CONTRACT REFERENCE SOW Para. 3.1.3.2		6. REQUIRING OFFICE Identified in Delivery Orders										
7. DD 250 REQ  SEE BLK 16	9. DIST STATEMENT REQUIRED  SEE BLK 16	10. FREQUENCY  AS REQ	12. DATE OF FIRST SUBMISSION SEE BLK 16	14. DISTRIBUTION SEE BLK 16										
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A. CONTRACT LINE ITEM NO.	B. EXH/ATCH NO.	C. CATEGORY TDP _____ TM _____ OTHER					
D. SYSTEM / ITEM <b>USMC CEC</b>	E. CONTRACT / PR NO.	F. CONTRACTOR					
1. DATA ITEM NO. <b>A008</b>	2. TITLE OF DATA ITEM <b>SOFTWARE TEST PLAN (STP)</b>	3. SUBTITLE <b>STP INFORMATION</b>					
11. AUTHORITY ( <i>Data acquisition Document No.</i> ) <b>DI-IPSC-81438</b>	5. CONTRACT REFERENCE <b>SOW Para. 3.1.4.1</b>	6. REQUIRING OFFICE <b>Identified in Delivery Orders</b>					
7. DD 250 REQ <b>SEE BLK 16</b>	9. DIST STATEMENT REQUIRED <b>SEE BLK 16</b>	10. FREQUENCY <b>AS REQ</b>	12. DATE OF FIRST SUBMISSION <b>SEE BLK 16</b>	14. DISTRIBUTION <b>SEE BLK 16</b>			
8. APP CODE <b>A</b>	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION <b>20DARC</b>	a. ADDRESSEE <b>SEE BLK 16</b>	b. COPIES FINAL DRAFT REGREP <b>1    0    1</b>			
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<b>D. SYSTEM / ITEM</b> USMC CEC			<b>E. CONTRACT / PR NO.</b>		<b>F. CONTRACTOR</b>									
<b>1. DATA ITEM NO.</b> A009		<b>2. TITLE OF DATA ITEM</b> SOFTWARE TEST DESCRIPTION			<b>3. SUBTITLE</b>									
<b>12. AUTHORITY (Data acquisition Document No.)</b> DI-IPSC-81439			<b>5. CONTRACT REFERENCE</b> SOW Para. 3.1.4.2		<b>6. REQUIRING OFFICE</b> Identified in Delivery Orders									
<b>7. DD 250 REQ</b> SEE BLK 16	<b>9. DIST STATEMENT REQUIRED</b>  SEE BLK 16	<b>10. FREQUENCY</b> AS REQ		<b>12. DATE OF FIRST SUBMISSION</b> SEE BLK 16		<b>14. DISTRIBUTION</b> SEE BLK 16								
<b>8. APP CODE</b> A		<b>11. AS OF DATE</b>		<b>13. DATE OF SUBSEQUENT SUBMISSION</b> 5DARC		<b>a. ADDRESSEE</b> SEE BLK 16 <table border="1"> <tr> <th colspan="2"><b>b. COPIES</b></th> </tr> <tr> <td><b>DRAFT</b></td> <td><b>FINAL</b></td> </tr> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</td> </tr> </table>		<b>b. COPIES</b>		<b>DRAFT</b>	<b>FINAL</b>	1	0	0
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						<b>G. PREPARED BY</b>			<b>H. DATE</b>		<b>I. APPROVED BY</b>		<b>J. DATE</b>	

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<b>D. SYSTEM / ITEM</b> USMC CEC			<b>E. CONTRACT / PR NO.</b>		<b>F. CONTRACTOR</b>									
<b>1. DATA ITEM NO.</b>  A010		<b>2. TITLE OF DATA ITEM</b>  SOFTWARE TEST REPORT			<b>3. SUBTITLE</b>									
<b>13. AUTHORITY (Data acquisition Document No.)</b>  DI-IPSC-81440			<b>5. CONTRACT REFERENCE</b> SOW Para. 3.1.4.2		<b>6. REQUIRING OFFICE</b> Identified in Delivery Orders									
<b>7. DD 250 REQ</b> SEE BLK 16	<b>9. DIST STATEMENT REQUIRED</b>  SEE BLK 16	<b>10. FREQUENCY</b> AS REQ		<b>12. DATE OF FIRST SUBMISSION</b> SEE BLK 16		<b>14. DISTRIBUTION</b> SEE BLK 16								
<b>8. APP CODE</b>  A		<b>11. AS OF DATE</b>		<b>13. DATE OF SUBSEQUENT SUBMISSION</b> 10DARC		<b>a. ADDRESSEE</b> SEE BLK 16 <table border="1"> <tr> <td colspan="2"><b>b. COPIES</b></td> </tr> <tr> <td><b>DRAFT</b></td> <td><b>FINAL</b></td> </tr> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</td> </tr> </table>		<b>b. COPIES</b>		<b>DRAFT</b>	<b>FINAL</b>	1	0	0
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<b>D. SYSTEM / ITEM</b> USMC CEC			<b>E. CONTRACT / PR NO.</b>		<b>F. CONTRACTOR</b>		
<b>1. DATA ITEM NO.</b> A011	<b>2. TITLE OF DATA ITEM</b> SOFTWARE TEST DESCRIPTION (STD)			<b>3. SUBTITLE</b> STD INFORMATION			
<b>14. AUTHORITY (Data acquisition Document No.)</b> DI-IPSC-81439			<b>5. CONTRACT REFERENCE</b> SOW Para. 3.1.4.3, 3.1.4.4, 3.1.6.2.1		<b>6. REQUIRING OFFICE</b> Identified in Delivery Orders		
<b>7. DD 250 REQ</b> SEE BLK 16	<b>9. DIST STATEMENT REQUIRED</b>  SEE BLK 16	<b>10. FREQUENCY</b> AS REQ		<b>12. DATE OF FIRST SUBMISSION</b> SEE BLK 16			
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					<b>DRAFT</b>	<b>REG</b>	<b>REPO</b>
				SEE BLK 16	1	0	1
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<b>G. PREPARED BY</b>		<b>H. DATE</b>		<b>I. APPROVED BY</b>			
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D. SYSTEM / ITEM USMC CEC			E. CONTRACT / PR NO.		F. CONTRACTOR		
1. DATA ITEM NO.  A012	2. TITLE OF DATA ITEM  SOFTWARE TEST REPORT (STR)			3. SUBTITLE  STR INFORMATION			
15. AUTHORITY ( <i>Data acquisition Document No.</i> )  DI-IPSC-81440		5. CONTRACT REFERENCE SOW Para. 3.1.4.3, 3.1.4.4		6. REQUIRING OFFICE Identified in Delivery Orders			
7. DD 250 REQ  SEE BLK 16	9. DIST STATEMENT REQUIRED  SEE BLK 16	10. FREQUENCY  AS REQ	12. DATE OF FIRST SUBMISSION SEE BLK 16	14. DISTRIBUTION  SEE BLK 16			
8. APP CODE  A		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION  10DARC	a. ADDRESSEE  SEE BLK 16	b. COPIES  FINAL DRAFT REGREP 1 0 1		
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<b>D. SYSTEM / ITEM</b> USMC CEC		<b>E. CONTRACT / PR NO.</b>		<b>F. CONTRACTOR</b>									
<b>1. DATA ITEM NO.</b> A013	<b>2. TITLE OF DATA ITEM</b> SOFTWARE TRANSITION PLAN		<b>3. SUBTITLE</b>										
<b>16. AUTHORITY (Data acquisition Document No.)</b> DI-IPSC-81429		<b>5. CONTRACT REFERENCE</b> SOW Para. 3.1.5, 3.1.6.4		<b>6. REQUIRING OFFICE</b> Identified in Delivery Orders									
<b>7. DD 250 REQ</b> SEE BLK 16	<b>9. DIST STATEMENT REQUIRED</b>  SEE BLK 16	<b>10. FREQUENCY</b> AS REQ	<b>12. DATE OF FIRST SUBMISSION</b> SEE BLK 16	<b>14. DISTRIBUTION</b> SEE BLK 16									
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<b>D. SYSTEM / ITEM</b> USMC CEC		<b>E. CONTRACT / PR NO.</b>		<b>F. CONTRACTOR</b>									
<b>1. DATA ITEM NO.</b>  A014	<b>2. TITLE OF DATA ITEM</b>  SOFTWARE PRODUCT SPECIFICATION		<b>3. SUBTITLE</b>										
<b>17. AUTHORITY (Data acquisition Document No.)</b>  DI-IPSC-81441		<b>5. CONTRACT REFERENCE</b> SOW Para. 3.1.5		<b>6. REQUIRING OFFICE</b> Identified in Delivery Orders									
<b>7. DD 250 REQ</b> SEE BLK 16	<b>9. DIST STATEMENT REQUIRED</b>  SEE BLK 16	<b>10. FREQUENCY</b> SEE BLK 16	<b>12. DATE OF FIRST SUBMISSION</b> SEE BLK 16	<b>14. DISTRIBUTION</b> SEE BLK 16									
<b>8. APP CODE</b>  A		<b>11. AS OF DATE</b>	<b>13. DATE OF SUBSEQUENT SUBMISSION</b>  10DARC										
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<b>15. TOTAL</b>			1	0	1								
<b>G. PREPARED BY</b>		<b>H. DATE</b>	<b>I. APPROVED BY</b>		<b>J. DATE</b>								

<b>17. PRICE GROUP</b>
<b>18. ESTIMATE TOTAL PRICE</b>

<b>CONTRACT DATA REQUIREMENTS LIST</b> (1 Data Item)	<b>Form Approved</b>  OMB No. 0704-0188
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<b>D. SYSTEM / ITEM</b> USMC CEC		<b>E. CONTRACT / PR NO.</b>		<b>F. CONTRACTOR</b>									
<b>1. DATA ITEM NO.</b> A015	<b>2. TITLE OF DATA ITEM</b> SOFTWARE VERSION DESCRIPTION		<b>3. SUBTITLE</b>										
<b>18. AUTHORITY (Data acquisition Document No.)</b> DI-IPSC-81442		<b>5. CONTRACT REFERENCE</b> SOW Para. 3.1.5		<b>6. REQUIRING OFFICE</b> Identified in Delivery Orders									
<b>7. DD 250 REQ</b> SEE BLK 16	<b>9. DIST STATEMENT REQUIRED</b>  SEE BLK 16	<b>10. FREQUENCY</b> SEE BLK 16	<b>12. DATE OF FIRST SUBMISSION</b> SEE BLK 16	<b>14. DISTRIBUTION</b> SEE BLK 16									
<b>8. APP CODE</b> A		<b>11. AS OF DATE</b>	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> 10DARC										
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<b>15. TOTAL</b>			1	0	1								
<b>G. PREPARED BY</b>		<b>H. DATE</b>	<b>I. APPROVED BY</b>		<b>J. DATE</b>								

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<b>D. SYSTEM / ITEM</b> USMC CEC			<b>E. CONTRACT / PR NO.</b>		<b>F. CONTRACTOR</b>									
<b>1. DATA ITEM NO.</b> A016		<b>2. TITLE OF DATA ITEM</b> TECHNICAL REPORT - STUDY/SERVICES			<b>3. SUBTITLE</b>									
<b>19. AUTHORITY (Data acquisition Document No.)</b> DI-MISC-80508			<b>5. CONTRACT REFERENCE</b> SOW Para. 3.1.6.2.2		<b>6. REQUIRING OFFICE</b> Identified in Delivery Orders									
<b>7. DD 250 REQ</b> SEE BLK 16	<b>9. DIST STATEMENT REQUIRED</b>  SEE BLK 16	<b>10. FREQUENCY</b> AS REQ		<b>12. DATE OF FIRST SUBMISSION</b> SEE BLK 16		<b>14. DISTRIBUTION</b> SEE BLK 16								
<b>8. APP CODE</b> N		<b>11. AS OF DATE</b>		<b>13. DATE OF SUBSEQUENT SUBMISSION</b> SEE BLK 16		<b>a. ADDRESSEE</b> SEE BLK 16 <b>b. COPIES</b> <table border="1"> <tr> <td colspan="2">DRAFT</td> <td colspan="2">FINAL</td> </tr> <tr> <td>0</td> <td>0</td> <td>0</td> <td>1</td> </tr> </table>		DRAFT		FINAL		0	0	0
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						<b>G. PREPARED BY</b>			<b>H. DATE</b>		<b>I. APPROVED BY</b>		<b>J. DATE</b>	

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<b>D. SYSTEM / ITEM</b> USMC CEC			<b>E. CONTRACT / PR NO.</b>		<b>F. CONTRACTOR</b>						
<b>1. DATA ITEM NO.</b> A017		<b>2. TITLE OF DATA ITEM</b> PRODUCT/ASSET CONFIGURATION DATA INFORMATION PACKET			<b>3. SUBTITLE</b>						
<b>20. AUTHORITY (Data acquisition Document No.)</b> DI-CMAN-81553			<b>5. CONTRACT REFERENCE</b> SOW Para. 3.1.6.3		<b>6. REQUIRING OFFICE</b> Identified in Delivery Orders						
<b>7. DD 250 REQ</b> SEE BLK 16		<b>9. DIST STATEMENT REQUIRED</b> SEE BLK 16		<b>10. FREQUENCY</b> AS REQ		<b>12. DATE OF FIRST SUBMISSION</b> SEE BLK 16					
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<b>15. TOTAL</b>						0		0			
<b>G. PREPARED BY</b>				<b>H. DATE</b>		<b>I. APPROVED BY</b>		<b>J. DATE</b>			

17. PRICE GROUP

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<b>A. CONTRACT LINE ITEM NO.</b>		<b>B. EXH/ATCH NO.</b>		<b>C. CATEGORY</b> TDP _____ TM _____ OTHER _____			
<b>D. SYSTEM / ITEM</b> USMC CEC			<b>E. CONTRACT / PR NO.</b>		<b>F. CONTRACTOR</b>		
<b>1. DATA ITEM NO.</b>  A018	<b>2. TITLE OF DATA ITEM</b>  PROGRAM PLAN				<b>3. SUBTITLE</b>  INTEGRATED PROJECT TEAM CHARTER INFORMATION		
<b>21. AUTHORITY (Data acquisition Document No.)</b>  DI-MGMT-80909			<b>5. CONTRACT REFERENCE</b> SOW Para. 3.1.10.1		<b>6. REQUIRING OFFICE</b> Identified in Delivery Orders		
<b>7. DD 250 REQ</b>  SEE BLK 16	<b>9. DIST STATEMENT REQUIRED</b>  SEE BLK 16	<b>10. FREQUENCY</b>  AS REQ	<b>12. DATE OF FIRST SUBMISSION</b> SEE BLK 16	<b>14. DISTRIBUTION</b>  SEE BLK 16			
<b>8. APP CODE</b>  N		<b>11. AS OF DATE</b>	<b>13. DATE OF SUBSEQUENT SUBMISSION</b>  SEE BLK 16	<b>a. ADDRESSEE</b>	<b>b. COPIES</b>		
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<b>A. CONTRACT LINE ITEM NO.</b>		<b>B. EXH/ATCH NO.</b>		<b>C. CATEGORY</b> TDP _____ TM _____ OTHER _____							
<b>D. SYSTEM / ITEM</b> USMC CEC			<b>E. CONTRACT / PR NO.</b>		<b>F. CONTRACTOR</b>						
<b>1. DATA ITEM NO.</b>  A019	<b>2. TITLE OF DATA ITEM</b>  STATUS REPORT			<b>3. SUBTITLE</b>  MONTHLY PROGRESS REPORT							
<b>22. AUTHORITY (Data acquisition Document No.)</b>  DI-MGMT-80368			<b>5. CONTRACT REFERENCE</b> SOW Para. 3.1.10.2, 4		<b>6. REQUIRING OFFICE</b> Identified in Delivery Orders						
<b>7. DD 250 REQ</b>  SEE BLK 16	<b>9. DIST STATEMENT REQUIRED</b>  SEE BLK 16	<b>10. FREQUENCY</b>  MONTHLY	<b>12. DATE OF FIRST SUBMISSION</b> 30 DAC		<b>14. DISTRIBUTION</b>  SEE BLK 16						
<b>8. APP CODE</b>  N		<b>11. AS OF DATE</b>	<b>13. DATE OF SUBSEQUENT SUBMISSION</b>  EOM		<b>a. ADDRESSEE</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2"><b>b. COPIES</b></td> </tr> <tr> <td><b>DRAFT</b></td> <td><b>FINAL</b></td> </tr> <tr> <td>SEE BLK 16</td> <td>0 0 1</td> </tr> </table>		<b>b. COPIES</b>		<b>DRAFT</b>	<b>FINAL</b>	SEE BLK 16
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					<b>15. TOTAL</b>						
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<b>G. PREPARED BY</b>			<b>H. DATE</b>		<b>I. APPROVED BY</b>						
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<b>D. SYSTEM / ITEM</b> USMC CEC			<b>E. CONTRACT / PR NO.</b>		<b>F. CONTRACTOR</b>									
<b>1. DATA ITEM NO.</b> A020		<b>2. TITLE OF DATA ITEM</b> SCIENTIFIC AND TECHNICAL REPORTS			<b>3. SUBTITLE</b> TECHNICAL REPORTS									
<b>23. AUTHORITY (Data acquisition Document No.)</b> DI-MISC-80711			<b>5. CONTRACT REFERENCE</b> SOW Para. 3.2.2.1		<b>6. REQUIRING OFFICE</b> Identified in Delivery Orders									
<b>7. DD 250 REQ</b> SEE BLK 16	<b>9. DIST STATEMENT REQUIRED</b>  SEE BLK 16	<b>10. FREQUENCY</b> AS REQ		<b>12. DATE OF FIRST SUBMISSION</b> SEE BLK 16		<b>14. DISTRIBUTION</b> SEE BLK 16								
<b>8. APP CODE</b> N		<b>11. AS OF DATE</b>		<b>13. DATE OF SUBSEQUENT SUBMISSION</b> SEE BLK 16		<b>a. ADDRESSEE</b> SEE BLK 16 <b>b. COPIES</b> <table border="1"> <tr> <td colspan="2">FINAL</td> </tr> <tr> <td>DRAF</td> <td>REG/REPO</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</td> </tr> </table>		FINAL		DRAF	REG/REPO	0	0	0
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<b>D. SYSTEM / ITEM</b> USMC CEC			<b>E. CONTRACT / PR NO.</b>		<b>F. CONTRACTOR</b>		
<b>1. DATA ITEM NO.</b>  A021	<b>2. TITLE OF DATA ITEM</b>  INTERFACE DESIGN DESCRIPTION				<b>3. SUBTITLE</b>		
<b>24. AUTHORITY (Data acquisition Document No.)</b>  DI-IPSC-81436			<b>5. CONTRACT REFERENCE</b> SOW Para. 3.2.2.3		<b>6. REQUIRING OFFICE</b> Identified in Delivery Orders		
<b>7. DD 250 REQ</b>  SEE BLK 16	<b>9. DIST STATEMENT REQUIRED</b>  SEE BLK 16	<b>10. FREQUENCY</b>  AS REQ	<b>12. DATE OF FIRST SUBMISSION</b> SEE BLK 16	<b>14. DISTRIBUTION</b>  SEE BLK 16			
<b>8. APP CODE</b>  A		<b>11. AS OF DATE</b>	<b>13. DATE OF SUBSEQUENT SUBMISSION</b>  20DARC	<b>a. ADDRESSEE</b>	<b>b. COPIES</b>		
						<b>DRAF</b>	<b>REG</b>
<b>16. REMARKS</b>  <b>BLOCK 4</b> Contractor Format Acceptable.  <b>BLOCK 7</b> Letter of Transmittal shall be sent to the COR wich will be assigned at a later date.  <b>BLOCK 8</b> Approval is for technical content. Allow 20 days for Government review. Final shall incorporate all review comments and corrections.  <b>BLOCK 9</b> <u>DISTRIBUTION STATEMENT B:</u> Distribution authorized to U.S. Government agencies only due to Proprietary Information, dated 25 June 1987. Other request for the document shall be referred to Commander Code 7027, NAVSURFWARCENDIV Crane, 300 Highway 361, Crane IN 47522-5001.  <b>BLOCK 12</b> Submittal dates as established on individual delivery orders as applicable.  <b>BLOCK 14</b> Distribution of both draft and final versions shall be in electronic media distributed via E-mail. Any attached files shall be in IBM-PC compatible word processor format. The Addressee shall be the designated COR which will be assigned at a later date.  <b>DESTRUCTION NOTICE:</b> For unclassified, limited document, destroy by any method that will prevent disclosure of contents or reconstruction of the document.				SEE BLK 16	1	0	1
<b>G. PREPARED BY</b>			<b>H. DATE</b>	<b>I. APPROVED BY</b>		<b>J. DATE</b>	

<b>17. PRICE GROUP</b>
<b>18. ESTIMATE TOTAL PRICE</b>

<b>CONTRACT DATA REQUIREMENTS LIST</b> (1 Data Item)					<b>Form Approved</b>  <b>OMB No. 0704-0188</b>		
Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.							
<b>A. CONTRACT LINE ITEM NO.</b>		<b>B. EXH/ATCH NO.</b>		<b>C. CATEGORY</b> TDP _____ TM _____ OTHER _____			
<b>D. SYSTEM / ITEM</b> USMC CEC			<b>E. CONTRACT / PR NO.</b>		<b>F. CONTRACTOR</b>		
<b>1. DATA ITEM NO.</b>  A022	<b>2. TITLE OF DATA ITEM</b>  PRESENTATION MATERIAL				<b>3. SUBTITLE</b>		
<b>25. AUTHORITY (Data acquisition Document No.)</b>  DI-ADMN-81373			<b>5. CONTRACT REFERENCE</b> SOW Para. 3.2.2.15		<b>6. REQUIRING OFFICE</b> Identified in Delivery Orders		
<b>7. DD 250 REQ</b>  SEE BLK 16	<b>9. DIST STATEMENT REQUIRED</b>  SEE BLK 16	<b>10. FREQUENCY</b>  AS REQ	<b>12. DATE OF FIRST SUBMISSION</b> SEE BLK 16	<b>14. DISTRIBUTION</b>  SEE BLK 16			
<b>8. APP CODE</b>  N		<b>11. AS OF DATE</b>	<b>13. DATE OF SUBSEQUENT SUBMISSION</b>  SEE BLK 16				
<b>16. REMARKS</b>  <b>BLOCK 4</b> Contractor Format Acceptable.  <b>BLOCK 7</b> Letter of Transmittal shall be sent to the COR which will be assigned at a later date.  <b>BLOCK 9</b> <u>DISTRIBUTION STATEMENT B:</u> Distribution authorized to U.S. Government agencies only due to Proprietary Information, dated 25 June 1987. Other request for the document shall be referred to Commander Code 7027, NAVSURFWARCENDIV Crane, 300 Highway 361, Crane IN 47522-5001.  <b>BLOCKS 12 and 13</b> Submittal dates as established on individual delivery orders as applicable.  <b>BLOCK 14</b> The address for distrubution shall be as follows: Commander, NAVSURFWARCENDIV Code 7027 300 Highway 361 Crane IN 47522-5001  The presentation material shall be in either hard copy format or audio/visual format depending on specific delivery order requests.  <b>DESTRUCTION NOTICE:</b> For unclassified, limited document, destroy by any method that will prevent disclosure of contents or reconstruction of the document.				<b>a. ADDRESSEE</b>	<b>b. COPIES</b>		
						<b>FINAL</b>	
					<b>DRAF</b>	<b>REG</b>	<b>REPO</b>
				SEE BLK 16	0	1	0
				<b>15. TOTAL</b>			
<b>G. PREPARED BY</b>			<b>H. DATE</b>	<b>I. APPROVED BY</b>		<b>J. DATE</b>	

<b>17. PRICE GROUP</b>
<b>18. ESTIMATE TOTAL PRICE</b>



## 6 DIRECT LABOR SECTION

Based on Government estimates, it is estimated that the following direct labor hours will be required for:

The base contract period (2 years).

<u>Labor Category</u>	<u>Total Estimated Hours</u>	<u>No. of Key Personnel Required Same for all Contract Years</u>
Senior Engineer	40,320	2 – 1 expert in display tech.; 1 server  1  1
tech.		
Engineer	30,720	
Configuration Management	7,520	
Integrator	16,000	
Tester	12,160	
Project Management	6,080	
Project Administration	13,600	
System Hardware Management	10,880	

Option Year I (Contract Year 3)

<u>Labor Category</u>	<u>Total Estimated Hours</u>
Senior Engineer	20,160
Engineer	15,360
Configuration Management	3,760
Integrator	8,000
Tester	6,080
Project Management	3,040
Project Administration	6,800
System Hardware Management	5,440

Option Year II (Contract Year 4)

<u>Labor Category</u>	<u>Total Estimated Hours</u>
Senior Engineer	20,160
Engineer	15,360
Configuration Management	3,760
Integrator	8,000
Tester	6,080
Project Management	3,040
Project Administration	6,800
System Hardware Management	5,440

Option Year III (Contract Year 5)

<u>Labor Category</u>	<u>Total Estimated Hours</u>
Senior Engineer	16,400
Engineer	16,840
Configuration Management	4,000

Integrator	9,400
Tester	6,720
Project Management	3,040
Project Administration	6,840
System Hardware Management	5,440

Travel is estimated at \$65,000 per year (\$130,000 for base period). Materials are estimated at \$1,000,000 per year (\$2,000,000 for the base period).

## **PROPOSAL**

Based on the above Government estimates for labor hours by category, the offeror is required to provide proposals for the base contract period and each option period below. The offeror shall identify proposed subcontractors by name, address, telephone number, and point of contact. If the offeror is unable to obtain direct and indirect rates from the proposed subcontractor it is required that, at a minimum, the total costs, fixed fee and total cost plus fixed fee for each subcontractor be provided. If the offeror is unable to obtain direct and indirect rates from the proposed subcontractor, it is requested that the offeror advise the proposed subcontractor to provide the backup data to the Government directly. Although the contract will be set up to award fixed-price delivery orders, cost-plus-fixed-fee delivery orders, or cost-plus-incentive-fee delivery orders, for purposes of proposing and evaluating, all delivery orders will be considered to be cost-plus-fixed-fee.

## PRIME CONTRACTOR - BASE CONTRACT PERIOD

Materials			\$1,000,000
Material Overhead	Base	Rate	
	<u>\$1,000,000</u>	<u>%</u>	<u>\$</u>
Travel			<u>\$130,000.00</u>
Direct Labor	Hours	Rate	
Senior Engineer	<u>40,320</u>	<u>\$</u>	
Engineer	<u>30,720</u>	<u>\$</u>	
Conf. Mgt.	<u>7,520</u>	<u>\$</u>	
Integrator	<u>16,000</u>	<u>\$</u>	
Tester	<u>12,160</u>	<u>\$</u>	
Proj. Management	<u>6,080</u>	<u>\$</u>	
Prog. Admin.	<u>13,600</u>	<u>\$</u>	
System Hardware Mgt.	<u>10,880</u>	<u>\$</u>	
Total Direct Labor			<u>\$</u>
Labor Overhead	Base	Rate	
	<u>\$</u>	<u>%</u>	<u>\$</u>
Other Direct Costs			<u>\$</u>
(Offeror shall provide an explanation/breakdown in this space as to what the Other Direct Costs consist of)			
Total Subcontractor Costs			<u>\$</u>
Note: Offerors shall provide a complete cost breakdown for all proposed subcontractors.			
Other Indirect Costs			<u>\$</u>
(Offeror shall provide explanation in this space as to what these costs are (i.e.; proposed rate, proposed base, etc.)			
Subtotal Costs			<u>\$</u>
General & Administrative	Base	Rate	
	<u>\$</u>	<u>%</u>	<u>\$</u>
Total Costs			<u>\$</u>
Facilities Capital Cost of Money (FCCM)			<u>\$</u>
Note: If proposing FCCM, offerors shall provide the completed DD Form 1861.			
Fixed Fee (Prime Contractor Effort)	Base	Percentage	
	<u>\$</u>	<u>%</u>	<u>\$</u>
Fixed Fee (Subcontracted Effort)	Base	Percentage	
	<u>\$</u>	<u>%</u>	<u>\$</u>
Total Proposed Cost-Plus-Fixed-Fee Including FCCM			<u>\$</u>

**PRIME CONTRACTOR – OPTION YEAR I (CONTRACT YEAR 3)**

Materials			\$1,000,000
Material Overhead	Base	Rate	
	<u>\$1,000,000</u>	<u>          %</u>	<u>\$                    </u>
Travel			<u>\$65,000.00</u>
Direct Labor	Hours	Rate	
Senior Engineer	<u>20,160</u>	<u>\$          </u>	
Engineer	<u>15,360</u>	<u>\$          </u>	
Conf. Mgt.	<u>3,760</u>	<u>\$          </u>	
Integrator	<u>8,000</u>	<u>\$          </u>	
Tester	<u>6,080</u>	<u>\$          </u>	
Proj. Management	<u>3,040</u>	<u>\$          </u>	
Prog. Admin.	<u>6,800</u>	<u>\$          </u>	
System Hardware Mgt.	<u>5,440</u>	<u>\$          </u>	
Total Direct Labor			<u>\$                    </u>
Labor Overhead	Base	Rate	
	<u>\$          </u>	<u>          %</u>	<u>\$                    </u>
Other Direct Costs			<u>\$                    </u>
(Offeror shall provide an explanation/breakdown in this space as to what the Other Direct Costs consist of)			
Total Subcontractor Costs			<u>\$                    </u>
Note: Offerors shall provide a complete cost breakdown for all proposed subcontractors.			
Other Indirect Costs			<u>\$                    </u>
(Offeror shall provide explanation in this space as to what these costs are (i.e.; proposed rate, proposed base, etc.)			
Subtotal Costs			<u>\$                    </u>
General & Administrative	Base	Rate	
	<u>\$          </u>	<u>          %</u>	<u>\$                    </u>
Total Costs			<u>\$                    </u>
Facilities Capital Cost of Money (FCCM)			<u>\$                    </u>
Note: If proposing FCCM, offerors shall provide the completed DD Form 1861.			
Fixed Fee (Prime Contractor Effort)	Base	Percentage	
	<u>\$          </u>	<u>          %</u>	<u>\$                    </u>
Fixed Fee (Subcontracted Effort)	Base	Percentage	
	<u>\$          </u>	<u>          %</u>	<u>\$                    </u>
Total Proposed Cost-Plus-Fixed-Fee Including FCCM			<u>\$                    </u>

**PRIME CONTRACTOR – OPTION YEAR II (CONTRACT YEAR 4)**

Materials			\$1,000,000
Material Overhead	Base	Rate	
	<u>\$1,000,000</u>	<u>          %</u>	<u>\$                    </u>
Travel			<u>\$65,000.00</u>
Direct Labor	Hours	Rate	
Senior Engineer	<u>20,160</u>	<u>\$          </u>	
Engineer	<u>15,360</u>	<u>\$          </u>	
Conf. Mgt.	<u>3,760</u>	<u>\$          </u>	
Integrator	<u>8,000</u>	<u>\$          </u>	
Tester	<u>6,080</u>	<u>\$          </u>	
Proj. Management	<u>3,040</u>	<u>\$          </u>	
Prog. Admin.	<u>6,800</u>	<u>\$          </u>	
System Hardware Mgt.	<u>5,440</u>	<u>\$          </u>	
Total Direct Labor			<u>\$                    </u>
Labor Overhead	Base	Rate	
	<u>\$          </u>	<u>          %</u>	<u>\$                    </u>
Other Direct Costs			<u>\$                    </u>
(Offeror shall provide an explanation/breakdown in this space as to what the Other Direct Costs consist of)			
Total Subcontractor Costs			<u>\$                    </u>
Note: Offerors shall provide a complete cost breakdown for all proposed subcontractors.			
Other Indirect Costs			<u>\$                    </u>
(Offeror shall provide explanation in this space as to what these costs are (i.e.; proposed rate, proposed base, etc.)			
Subtotal Costs			<u>\$                    </u>
General & Administrative	Base	Rate	
	<u>\$          </u>	<u>          %</u>	<u>\$                    </u>
Total Costs			<u>\$                    </u>
Facilities Capital Cost of Money (FCCM)			<u>\$                    </u>
Note: If proposing FCCM, offerors shall provide the completed DD Form 1861.			
Fixed Fee (Prime Contractor Effort)	Base	Percentage	
	<u>\$          </u>	<u>          %</u>	<u>\$                    </u>
Fixed Fee (Subcontracted Effort)	Base	Percentage	
	<u>\$          </u>	<u>          %</u>	<u>\$                    </u>
Total Proposed Cost-Plus-Fixed-Fee Including FCCM			<u>\$                    </u>

**PRIME CONTRACTOR – OPTION YEAR III (CONTRACT YEAR 5)**

Materials			\$1,000,000
Material Overhead	Base	Rate	
	<u>\$1,000,000</u>	<u>          %</u>	<u>\$                    </u>
Travel			<u>\$65,000.00</u>
Direct Labor	Hours	Rate	
Senior Engineer	<u>16,400</u>	<u>\$          </u>	
Engineer	<u>16,840</u>	<u>\$          </u>	
Conf. Mgt.	<u>4,000</u>	<u>\$          </u>	
Integrator	<u>9,400</u>	<u>\$          </u>	
Tester	<u>6,720</u>	<u>\$          </u>	
Proj. Management	<u>3,040</u>	<u>\$          </u>	
Prog. Admin.	<u>6,840</u>	<u>\$          </u>	
System Hardware Mgt.	<u>5,440</u>	<u>\$          </u>	
Total Direct Labor			<u>\$                    </u>
Labor Overhead	Base	Rate	
	<u>\$          </u>	<u>          %</u>	<u>\$                    </u>
Other Direct Costs			<u>\$                    </u>
(Offeror shall provide an explanation/breakdown in this space as to what the Other Direct Costs consist of)			
Total Subcontractor Costs			<u>\$                    </u>
Note: Offerors shall provide a complete cost breakdown for all proposed subcontractors.			
Other Indirect Costs			<u>\$                    </u>
(Offeror shall provide explanation in this space as to what these costs are (i.e.; proposed rate, proposed base, etc.)			
Subtotal Costs			<u>\$                    </u>
General & Administrative	Base	Rate	
	<u>\$          </u>	<u>          %</u>	<u>\$                    </u>
Total Costs			<u>\$                    </u>
Facilities Capital Cost of Money (FCCM)			<u>\$                    </u>
Note: If proposing FCCM, offerors shall provide the completed DD Form 1861.			
Fixed Fee (Prime Contractor Effort)	Base	Percentage	
	<u>\$          </u>	<u>          %</u>	<u>\$                    </u>
Fixed Fee (Subcontracted Effort)	Base	Percentage	
	<u>\$          </u>	<u>          %</u>	<u>\$                    </u>
Total Proposed Cost-Plus-Fixed-Fee Including FCCM			<u>\$                    </u>

4001

<b>DATA ITEM DESCRIPTION</b>			Form Approved OMB NO. 0704-0188	
Public reporting burden for collection of this information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate of Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
<b>1. TITLE</b>  SOFTWARE DEVELOPMENT PLAN (SDP)			<b>2. IDENTIFICATION NUMBER</b>  DI-IPSC-81427	
<b>3. DESCRIPTION/PURPOSE</b>  <p>3.1 The Software Development Plan (SDP) describes a developer's plans for conducting a software development effort. The term "software development" in this DID is meant to include new development, modification, reuse, reengineering, maintenance, and all other activities resulting in software products.</p> <p>3.2 The SDP provides the acquirer insight into, and a tool for monitoring, the processes to be followed for software development, the methods to be used, the approach to be followed for each activity, and project schedules, organization, and resources.</p>				
<b>4. APPROVAL DATE</b> (YYMMDD) 941205	<b>5. OFFICE OF PRIMARY RESPONSIBILITY</b> EC	<b>6a. DTIC APPLICABLE</b>	<b>6b. GIDEP APPLICABLE</b>	
<b>7. APPLICATION/INTERRELATIONSHIP</b>  <p>7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract.</p> <p>7.2 This DID is used when the developer is tasked to develop and record plans for conducting software development activities.</p> <p>7.3 Portions of this plan may be bound separately if this approach enhances their usability. Examples include plans for software configuration management and software quality assurance.</p> <p>7.4 The Contract Data Requirements List (CDRL) (DD 1423) should specify whether deliverable data are to be delivered on paper or electronic media; are to be in a given electronic form (such as ASCII, CALS, or compatible with a specified word processor or other support software); may be delivered in developer format rather than in the format specified herein; and may reside in a computer-aided software engineering (CASE) or other automated tool rather than in the form of a traditional document.</p> <p>7.5 This DID supersedes DI-MCCR-80030A, DI-MCCR-80297, DI-MCCR-80298, DI-MCCR-80299, DI-MCCR-80300, and DI-MCCR-80319.</p>				
<b>8. APPROVAL LIMITATION</b> Limited Approval from 12/5/94 through 12/5/96		<b>9a. APPLICABLE FORMS</b>	<b>9b. AMSC NUMBER</b> N7070	
<b>10. PREPARATION INSTRUCTIONS</b>  <p>10.1 <u>General instructions.</u></p> <p>a. <u>Automated techniques.</u> Use of automated techniques is encouraged. The term "document" in this DID means a collection of data regardless of its medium.</p> <p>b. <u>Alternate presentation styles.</u> Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles.</p> <p style="text-align: right;">(Continued on Page 2)</p>				
<b>11. DISTRIBUTION STATEMENT</b> DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.				

Software Development Plan (SDP)  
DI-IPSC-81427

10. PREPARATION INSTRUCTIONS -- 10.1 General Instructions (continued)

- c. Title page or identifier. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the system, subsystem, or item to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; and distribution statement. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.
- d. Table of contents. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.
- e. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.
- f. Response to tailoring instructions. If a paragraph is tailored out of this DID, the resulting document shall contain the corresponding paragraph number and title, followed by "This paragraph has been tailored out." For data in a database or other alternative form, this representation need occur only in the table of contents or equivalent.
- g. Multiple paragraphs and subparagraphs. Any section, paragraph, or subparagraph in this DID may be written as multiple paragraphs or subparagraphs to enhance readability.
- h. Standard data descriptions. If a data description required by this DID has been published in a standard data element dictionary specified in the contract, reference to an entry in that dictionary is preferred over including the description itself.
- i. Substitution of existing documents. Commercial or other existing documents, including other project plans, may be substituted for all or part of the document if they contain the required data.

10.2 Content requirements. Content requirements begin on the following page. The numbers shown designate the paragraph numbers to be used in the document. Each such number is understood to have the prefix "10.2" within this DID. For example, the paragraph numbered 1.1 is understood to be paragraph 10.2.1.1 within this DID.



Software Development Plan (SDP)  
DI-IPSC-81427

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain a full identification of the system and the software to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2 System overview. This paragraph shall briefly state the purpose of the system and the software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 Document overview. This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

1.4 Relationship to other plans. This paragraph shall describe the relationship, if any, of the SDP to other project management plans.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this plan. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Overview of required work. This section shall be divided into paragraphs as needed to establish the context for the planning described in later sections. It shall include, as applicable, an overview of:

- a. Requirements and constraints on the system and software to be developed
- b. Requirements and constraints on project documentation
- c. Position of the project in the system life cycle
- d. The selected program/acquisition strategy or any requirements or constraints on it
- e. Requirements and constraints on project schedules and resources
- f. Other requirements and constraints, such as on project security, privacy, methods, standards, interdependencies in hardware and software development, etc.

4. Plans for performing general software development activities. This section shall be divided into the following paragraphs. Provisions corresponding to non-required activities may be satisfied by the words "Not applicable." If different builds or different software on the project require different planning, these differences shall be noted in the paragraphs. In addition to the content specified below, each paragraph shall identify applicable risks/uncertainties and plans for dealing with them.

4.1 Software development process. This paragraph shall describe the software development process to be used. The planning shall cover all contractual clauses concerning this topic, identifying planned builds, if applicable, their objectives, and the software development activities to be performed in each build.

Software Development Plan (SDP)  
DI-IPSC-81427

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

4.2 General plans for software development. This paragraph shall be divided into the following subparagraphs.

4.2.1 Software development methods. This paragraph shall describe or reference the software development methods to be used. Included shall be descriptions of the manual and automated tools and procedures to be used in support of these methods. The methods shall cover all contractual clauses concerning this topic. Reference may be made to other paragraphs in this plan if the methods are better described in context with the activities to which they will be applied.

4.2.2 Standards for software products. This paragraph shall describe or reference the standards to be followed for representing requirements, design, code, test cases, test procedures, and test results. The standards shall cover all contractual clauses concerning this topic. Reference may be made to other paragraphs in this plan if the standards are better described in context with the activities to which they will be applied. Standards for code shall be provided for each programming language to be used. They shall include at a minimum:

- a. Standards for format (such as indentation, spacing, capitalization, and order of information)
- b. Standards for header comments (requiring, for example, name/identifier of the code; version identification; modification history; purpose; requirements and design decisions implemented; notes on the processing (such as algorithms used, assumptions, constraints, limitations, and side effects); and notes on the data (inputs, outputs, variables, data structures, etc.)
- c. Standards for other comments (such as required number and content expectations)
- d. Naming conventions for variables, parameters, packages, procedures, files, etc.
- e. Restrictions, if any, on the use of programming language constructs or features
- f. Restrictions, if any, on the complexity of code aggregates

4.2.3 Reusable software products. This paragraph shall be divided into the following subparagraphs.

4.2.3.1 Incorporating reusable software products. This paragraph shall describe the approach to be followed for identifying, evaluating, and incorporating reusable software products, including the scope of the search for such products and the criteria to be used for their evaluation. It shall cover all contractual clauses concerning this topic. Candidate or selected reusable software products known at the time this plan is prepared or updated shall be identified and described, together with benefits, drawbacks, and restrictions, as applicable, associated with their use.

4.2.3.2 Developing reusable software products. This paragraph shall describe the approach to be followed for identifying, evaluating, and reporting opportunities for developing reusable software products. It shall cover all contractual clauses concerning this topic.

Software Development Plan (SDP)  
DI-IPSC-81427

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

4.2.4 Handling of critical requirements. This paragraph shall be divided into the following subparagraphs to describe the approach to be followed for handling requirements designated critical. The planning in each subparagraph shall cover all contractual clauses concerning the identified topic.

- 4.2.4.1 Safety assurance
- 4.2.4.2 Security assurance
- 4.2.4.3 Privacy assurance
- 4.2.4.4 Assurance of other critical requirements

4.2.5 Computer hardware resource utilization. This paragraph shall describe the approach to be followed for allocating computer hardware resources and monitoring their utilization. It shall cover all contractual clauses concerning this topic.

4.2.6 Recording rationale. This paragraph shall describe the approach to be followed for recording rationale that will be useful to the support agency for key decisions made on the project. It shall interpret the term "key decisions" for the project and state where the rationale are to be recorded. It shall cover all contractual clauses concerning this topic.

4.2.7 Access for acquirer review. This paragraph shall describe the approach to be followed for providing the acquirer or its authorized representative access to developer and subcontractor facilities for review of software products and activities. It shall cover all contractual clauses concerning this topic.

5. Plans for performing detailed software development activities. This section shall be divided into the following paragraphs. Provisions corresponding to non-required activities may be satisfied by the words "Not applicable." If different builds or different software on the project require different planning, these differences shall be noted in the paragraphs. The discussion of each activity shall include the approach (methods/procedures/tools) to be applied to: 1) the analysis or other technical tasks involved, 2) the recording of results, and 3) the preparation of associated deliverables, if applicable. The discussion shall also identify applicable risks/uncertainties and plans for dealing with them. Reference may be made to 4.2.1 if applicable methods are described there.

5.1 Project planning and oversight. This paragraph shall be divided into the following subparagraphs to describe the approach to be followed for project planning and oversight. The planning in each subparagraph shall cover all contractual clauses regarding the identified topic.

- 5.1.1 Software development planning (covering updates to this plan)
- 5.1.2 CSCI test planning
- 5.1.3 System test planning
- 5.1.4 Software installation planning
- 5.1.5 Software transition planning
- 5.1.6 Following and updating plans, including the intervals for management review

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

5.2 Establishing a software development environment. This paragraph shall be divided into the following subparagraphs to describe the approach to be followed for establishing, controlling, and maintaining a software development environment. The planning in each subparagraph shall cover all contractual clauses regarding the identified topic.

- 5.2.1 Software engineering environment
- 5.2.2 Software test environment
- 5.2.3 Software development library
- 5.2.4 Software development files
- 5.2.5 Non-deliverable software

5.3 System requirements analysis. This paragraph shall be divided into the following subparagraphs to describe the approach to be followed for participating in system requirements analysis. The planning in each subparagraph shall cover all contractual clauses regarding the identified topic.

- 5.3.1 Analysis of user input
- 5.3.2 Operational concept
- 5.3.3 System requirements

5.4 System design. This paragraph shall be divided into the following subparagraphs to describe the approach to be followed for participating in system design. The planning in each subparagraph shall cover all contractual clauses regarding the identified topic.

- 5.4.1 System-wide design decisions
- 5.4.2 System architectural design

5.5 Software requirements analysis. This paragraph shall describe the approach to be followed for software requirements analysis. The approach shall cover all contractual clauses concerning this topic.

5.6 Software design. This paragraph shall be divided into the following subparagraphs to describe the approach to be followed for software design. The planning in each subparagraph shall cover all contractual clauses regarding the identified topic.

- 5.6.1 CSCI-wide design decisions
- 5.6.2 CSCI architectural design
- 5.6.3 CSCI detailed design

5.7 Software implementation and unit testing. This paragraph shall be divided into the following subparagraphs to describe the approach to be followed for software implementation and unit testing. The planning in each subparagraph shall cover all contractual clauses regarding the identified topic.

- 5.7.1 Software implementation
- 5.7.2 Preparing for unit testing
- 5.7.3 Performing unit testing
- 5.7.4 Revision and retesting
- 5.7.5 Analyzing and recording unit test results

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

5.8 Unit integration and testing. This paragraph shall be divided into the following subparagraphs to describe the approach to be followed for unit integration and testing. The planning in each subparagraph shall cover all contractual clauses regarding the identified topic.

- 5.8.1 Preparing for unit integration and testing
- 5.8.2 Performing unit integration and testing
- 5.8.3 Revision and retesting
- 5.8.4 Analyzing and recording unit integration and test results

5.9 CSCI qualification testing. This paragraph shall be divided into the following subparagraphs to describe the approach to be followed for CSCI qualification testing. The planning in each subparagraph shall cover all contractual clauses regarding the identified topic.

- 5.9.1 Independence in CSCI qualification testing
- 5.9.2 Testing on the target computer system
- 5.9.3 Preparing for CSCI qualification testing
- 5.9.4 Dry run of CSCI qualification testing
- 5.9.5 Performing CSCI qualification testing
- 5.9.6 Revision and retesting
- 5.9.7 Analyzing and recording CSCI qualification test results

5.10 CSCI/HWCI integration and testing. This paragraph shall be divided into the following subparagraphs to describe the approach to be followed for participating in CSCI/HWCI integration and testing. The planning in each subparagraph shall cover all contractual clauses regarding the identified topic.

- 5.10.1 Preparing for CSCI/HWCI integration and testing
- 5.10.2 Performing CSCI/HWCI integration and testing
- 5.10.3 Revision and retesting
- 5.10.4 Analyzing and recording CSCI/HWCI integration and test results

5.11 System qualification testing. This paragraph shall be divided into the following subparagraphs to describe the approach to be followed for participating in system qualification testing. The planning in each subparagraph shall cover all contractual clauses regarding the identified topic.

- 5.11.1 Independence in system qualification testing
- 5.11.2 Testing on the target computer system
- 5.11.3 Preparing for system qualification testing
- 5.11.4 Dry run of system qualification testing
- 5.11.5 Performing system qualification testing
- 5.11.6 Revision and retesting
- 5.11.7 Analyzing and recording system qualification test results

5.12 Preparing for software use. This paragraph shall be divided into the following subparagraphs to describe the approach to be followed for preparing for software use. The planning in each subparagraph shall cover all contractual clauses regarding the identified topic.

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- 5.12.1 Preparing the executable software
- 5.12.2 Preparing version descriptions for user sites
- 5.12.3 Preparing user manuals
- 5.12.4 Installation at user sites

5.13 Preparing for software transition. This paragraph shall be divided into the following subparagraphs to describe the approach to be followed for preparing for software transition. The planning in each subparagraph shall cover all contractual clauses regarding the identified topic.

- 5.13.1 Preparing the executable software
- 5.13.2 Preparing source files
- 5.13.3 Preparing version descriptions for the support site
- 5.13.4 Preparing the "as built" CSCI design and other software support information
- 5.13.5 Updating the system design description
- 5.13.6 Preparing support manuals
- 5.13.7 Transition to the designated support site

5.14 Software configuration management. This paragraph shall be divided into the following subparagraphs to describe the approach to be followed for software configuration management. The planning in each subparagraph shall cover all contractual clauses regarding the identified topic.

- 5.14.1 Configuration identification
- 5.14.2 Configuration control
- 5.14.3 Configuration status accounting
- 5.14.4 Configuration audits
- 5.14.5 Packaging, storage, handling, and delivery

5.15 Software product evaluation. This paragraph shall be divided into the following subparagraphs to describe the approach to be followed for software product evaluation. The planning in each subparagraph shall cover all contractual clauses regarding the identified topic.

- 5.15.1 In-process and final software product evaluations
- 5.15.2 Software product evaluation records, including items to be recorded
- 5.15.3 Independence in software product evaluation

5.16 Software quality assurance. This paragraph shall be divided into the following subparagraphs to describe the approach to be followed for software quality assurance. The planning in each subparagraph shall cover all contractual clauses regarding the identified topic.

- 5.16.1 Software quality assurance evaluations
- 5.16.2 Software quality assurance records, including items to be recorded
- 5.16.3 Independence in software quality assurance

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

5.17 Corrective action. This paragraph shall be divided into the following subparagraphs to describe the approach to be followed for corrective action. The planning in each subparagraph shall cover all contractual clauses regarding the identified topic.

5.17.1 Problem/change reports, including items to be recorded (candidate items include project name, originator, problem number, problem name, software element or document affected, origination date, category and priority, description, analyst assigned to the problem, date assigned, date completed, analysis time, recommended solution, impacts, problem status, approval of solution, follow-up actions, corrector, correction date, version where corrected, correction time, description of solution implemented)

5.17.2 Corrective action system

5.18 Joint technical and management reviews. This paragraph shall be divided into the following subparagraphs to describe the approach to be followed for joint technical and management reviews. The planning in each subparagraph shall cover all contractual clauses regarding the identified topic.

5.18.1 Joint technical reviews, including a proposed set of reviews

5.18.2 Joint management reviews, including a proposed set of reviews

5.19 Other software development activities. This paragraph shall be divided into the following subparagraphs to describe the approach to be followed for other software development activities. The planning in each subparagraph shall cover all contractual clauses regarding the identified topic.

5.19.1 Risk management, including known risks and corresponding strategies

5.19.2 Software management indicators, including indicators to be used

5.19.3 Security and privacy

5.19.4 Subcontractor management

5.19.5 Interface with software independent verification and validation (IV&V) agents

5.19.6 Coordination with associate developers

5.19.7 Improvement of project processes

5.19.8 Other activities not covered elsewhere in the plan

6. Schedules and activity network. This section shall present:

- a. Schedule(s) identifying the activities in each build and showing initiation of each activity, availability of draft and final deliverables and other milestones, and completion of each activity
- b. An activity network, depicting sequential relationships and dependencies among activities and identifying those activities that impose the greatest time restrictions on the project

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

7. Project organization and resources. This section shall be divided into the following paragraphs to describe the project organization and resources to be applied in each build.

7.1 Project organization. This paragraph shall describe the organizational structure to be used on the project, including the organizations involved, their relationships to one another, and the authority and responsibility of each organization for carrying out required activities.

7.2 Project resources. This paragraph shall describe the resources to be applied to the project. It shall include, as applicable:

- a. Personnel resources, including:
  - 1) The estimated staff-loading for the project (number of personnel over time)
  - 2) The breakdown of the staff-loading numbers by responsibility (for example, management, software engineering, software testing, software configuration management, software-product evaluation, software quality assurance)
  - 3) A breakdown of the skill levels, geographic locations, and security clearances of personnel performing each responsibility
- b. Overview of developer facilities to be used, including geographic locations in which the work will be performed, facilities to be used, and secure areas and other features of the facilities as applicable to the contracted effort.
- c. Acquirer-furnished equipment, software, services, documentation, data, and facilities required for the contracted effort. A schedule detailing when these items will be needed shall also be included.
- d. Other required resources, including a plan for obtaining the resources, dates needed, and availability of each resource item.

8. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendixes. Appendixes may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).



A002

<b>DATA ITEM DESCRIPTION</b>		Form Approved OMB NO. 0704-0188	
<small>Public reporting burden for collection of this information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate of Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.</small>			
1. TITLE <b>SYSTEM/SUBSYSTEM DESIGN DESCRIPTION (SSDD)</b>		2. IDENTIFICATION NUMBER <b>DI-IPSC-81432</b>	
3. DESCRIPTION/PURPOSE  3.1 The System/Subsystem Design Description (SSDD) describes the system- or subsystem-wide design and the architectural design of a system or subsystem. The SSDD may be supplemented by Interface Design Descriptions (IDDs) (DI-IPSC-81436) and Database Design Descriptions (DBDDs) (DI-IPSC-81437) as described in Block 7 below.  3.2 The SSDD, with its associated IDDs and DBDDs, is used as the basis for further system development. Throughout this DID, the term "system" may be interpreted to mean "subsystem" as applicable. The resulting document should be titled System Design Description or Subsystem Design Description (SSDD).			
4. APPROVAL DATE (YYMMDD) 941205	5. OFFICE OF PRIMARY RESPONSIBILITY EC	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE
7. APPLICATION/INTERRELATIONSHIP  7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract.  7.2 This DID is used when the developer is tasked define and record the design of a system or subsystem.  7.3 Design pertaining to interfaces may be presented in the SSDD or in IDDs. Design pertaining to databases may be presented in the SSDD or in DBDDs.  7.4 The Contract Data Requirements List (CDRL) (DD 1423) should specify whether deliverable data are to be delivered on paper or electronic media; are to be in a given electronic form (such as ASCII, CALS, or compatible with a specified word processor or other support software); may be delivered in developer format rather than in the format specified herein; and may reside in a computer-aided software engineering (CASE) or other automated tool rather than in the form of a traditional document.  7.5 This DID supersedes DI-CMAN-80534 and DI-MCCR-80302.			
8. APPROVAL LIMITATION Limited Approval from 12/5/94 through 12/5/96		9a. APPLICABLE FORMS	9b. AMSC NUMBER N7075
10. PREPARATION INSTRUCTIONS  10.1 <u>General instructions.</u>  a. <u>Automated techniques.</u> Use of automated techniques is encouraged. The term "document" in this DID means a collection of data regardless of its medium.  b. <u>Alternate presentation styles.</u> Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles.			
(Continued on Page 2)			
11. DISTRIBUTION STATEMENT DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.			

System/Subsystem Design Description (SSDD)  
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10. PREPARATION INSTRUCTIONS -- 10.1 General Instructions (continued)

- c. Title page or identifier. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the system, subsystem, or item to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; and distribution statement. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.
- d. Table of contents. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.
- e. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.
- f. Response to tailoring instructions. If a paragraph is tailored out of this DID, the resulting document shall contain the corresponding paragraph number and title, followed by "This paragraph has been tailored out." For data in a database or other alternative form, this representation need occur only in the table of contents or equivalent.
- g. Multiple paragraphs and subparagraphs. Any section, paragraph, or subparagraph in this DID may be written as multiple paragraphs or subparagraphs to enhance readability.
- h. Standard data descriptions. If a data description required by this DID has been published in a standard data element dictionary specified in the contract, reference to an entry in that dictionary is preferred over including the description itself.
- i. Substitution of existing documents. Commercial or other existing documents may be substituted for all or part of the document if they contain the required data.

10.2 Content requirements. Content requirements begin on the following page. The numbers shown designate the paragraph numbers to be used in the document. Each such number is understood to have the prefix "10.2" within this DID. For example, the paragraph numbered 1.1 is understood to be paragraph 10.2.1.1 within this DID.

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain a full identification of the system to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2 System overview. This paragraph shall briefly state the purpose of the system to which this document applies. It shall describe the general nature of the system; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 Document overview. This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this document. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. System-wide design decisions. This section shall be divided into paragraphs as needed to present system-wide design decisions, that is, decisions about the system's behavioral design (how it will behave, from a user's point of view, in meeting its requirements, ignoring internal implementation) and other decisions affecting the selection and design of system components. If all such decisions are explicit in the requirements or are deferred to the design of the system components, this section shall so state. Design decisions that respond to requirements designated critical, such as those for safety, security, or privacy, shall be placed in separate subparagraphs. If a design decision depends upon system states or modes, this dependency shall be indicated. Design conventions needed to understand the design shall be presented or referenced. Examples of system-wide design decisions are the following:

- a. Design decisions regarding inputs the system will accept and outputs it will produce, including interfaces with other systems, configuration items, and users (4.3.x of this DID identifies topics to be considered in this description). If part or all of this information is given in Interface Design Descriptions (IDDs), they may be referenced.
- b. Design decisions on system behavior in response to each input or condition, including actions the system will perform, response times and other performance characteristics, description of physical systems modeled, selected equations/algorithms/rules, and handling of unallowed inputs or conditions.
- c. Design decisions on how system databases/data files will appear to the user (4.3.x of this DID identifies topics to be considered in this description). If part or all of this information is given in Database Design Descriptions (DBDDs), they may be referenced.
- d. Selected approach to meeting safety, security, and privacy requirements.

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- e. Design and construction choices for hardware or hardware-software systems, such as physical size, color, shape, weight, materials, and markings.
- f. Other system-wide design decisions made in response to requirements, such as selected approach to providing required flexibility, availability, and maintainability.

4. System architectural design. This section shall be divided into the following paragraphs to describe the system architectural design. If part or all of the design depends upon system states or modes, this dependency shall be indicated. If design information falls into more than one paragraph, it may be presented once and referenced from the other paragraphs. Design conventions needed to understand the design shall be presented or referenced.

Note: For brevity, this section is written in terms of organizing a system directly into Hardware Configuration Items (HWCI)s, Computer Software Configuration Items (CSCI)s, and manual operations, but should be interpreted to cover organizing a system into subsystems, organizing a subsystem into HWCI)s, CSCI)s, and manual operations, or other variations as appropriate.

4.1 System components. This paragraph shall:

- a. Identify the components of the system (HWCI)s, CSCI)s, and manual operations). Each component shall be assigned a project-unique identifier. Note: a database may be treated as a CSCI or as part of a CSCI.
- b. Show the static (such as "consists of") relationship(s) of the components. Multiple relationships may be presented, depending on the selected design methodology.
- c. State the purpose of each component and identify the system requirements and system-wide design decisions allocated to it. (Alternatively, the allocation of requirements may be provided in 5.a.)
- d. Identify each component's development status/type, if known (such as new development, existing component to be reused as is, existing design to be reused as is, existing design or component to be reengineered, component to be developed for reuse, component planned for Build N, etc.) For existing design or components, the description shall provide identifying information, such as name, version, documentation references, location, etc.
- e. For each computer system or other aggregate of computer hardware resources identified for use in the system, describe its computer hardware resources (such as processors, memory, input/output devices, auxiliary storage, and communications/network equipment). Each description shall, as applicable, identify the configuration items that will use the resource, describe the allocation of resource utilization to each CSCI that will use the resource (for example, 20% of the resource's capacity allocated to CSCI 1, 30% to CSCI 2), describe the conditions under which utilization will be measured, and describe the characteristics of the resource:

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- 1) Descriptions of computer processors shall include, as applicable, manufacturer name and model number, processor speed/capacity, identification of instruction set architecture, applicable compiler(s), word size (number of bits in each computer word), character set standard (such as ASCII, EBCDIC), and interrupt capabilities.
  - 2) Descriptions of memory shall include, as applicable, manufacturer name and model number and memory size, type, speed, and configuration (such as 256K cache memory, 16MB RAM (4MB x 4)).
  - 3) Descriptions of input/output devices shall include, as applicable, manufacturer name and model number, type of device, and device speed/capacity.
  - 4) Descriptions of auxiliary storage shall include, as applicable, manufacturer name and model number, type of storage, amount of installed storage, and storage speed.
  - 5) Descriptions of communications/network equipment, such as modems, network interface cards, hubs, gateways, cabling, high speed data lines, or aggregates of these or other components, shall include, as applicable, manufacturer name and model number, data transfer rates/capacities, network topologies, transmission techniques, and protocols used.
  - 6) Each description shall also include, as applicable, growth capabilities, diagnostic capabilities, and any additional hardware capabilities relevant to the description.
- f. Present a specification tree for the system, that is, a diagram that identifies and shows the relationships among the planned specifications for the system components.

4.2 Concept of execution. This paragraph shall describe the concept of execution among the system components. It shall include diagrams and descriptions showing the dynamic relationship of the components, that is, how they will interact during system operation, including, as applicable, flow of execution control, data flow, dynamically controlled sequencing, state transition diagrams, timing diagrams, priorities among components, handling of interrupts, timing/sequencing relationships, exception handling, concurrent execution, dynamic allocation/deallocation, dynamic creation/deletion of objects, processes, tasks, and other aspects of dynamic behavior.

4.3 Interface design. This paragraph shall be divided into the following subparagraphs to describe the interface characteristics of the system components. It shall include both interfaces among the components and their interfaces with external entities such as other systems, configuration items, and users. Note: There is no requirement for these interfaces to be completely designed at this level; this paragraph is provided to allow the recording of interface design decisions made as part of system architectural design. If part or all of this information is contained in Interface Design Descriptions (IDDs) or elsewhere, these sources may be referenced.

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

4.3.1 Interface identification and diagrams. This paragraph shall state the project-unique identifier assigned to each interface and shall identify the interfacing entities (systems, configuration items, users, etc.) by name, number, version, and documentation references, as applicable. The identification shall state which entities have fixed interface characteristics (and therefore impose interface requirements on interfacing entities) and which are being developed or modified (thus having interface requirements imposed on them). One or more interface diagrams shall be provided, as appropriate, to depict the interfaces.

4.3.x (Project-unique identifier of interface). This paragraph (beginning with 4.3.2) shall identify an interface by project-unique identifier, shall briefly identify the interfacing entities, and shall be divided into subparagraphs as needed to describe the interface characteristics of one or both of the interfacing entities. If a given interfacing entity is not covered by this SSDD (for example, an external system) but its interface characteristics need to be mentioned to describe interfacing entities that are, these characteristics shall be stated as assumptions or as "When [the entity not covered] does this, [the entity that is covered] will ...." This paragraph may reference other documents (such as data dictionaries, standards for protocols, and standards for user interfaces) in place of stating the information here. The design description shall include the following, as applicable, presented in any order suited to the information to be provided, and shall note any differences in these characteristics from the point of view of the interfacing entities (such as different expectations about the size, frequency, or other characteristics of data elements):

- a. Priority assigned to the interface by the interfacing entity(ies)
- b. Type of interface (such as real-time data transfer, storage-and-retrieval of data, etc.) to be implemented.
- c. Characteristics of individual data elements that the interfacing entity(ies) will provide, store, send, access, receive, etc., such as:
  - 1) Names/identifiers
    - a) Project-unique identifier
    - b) Non-technical (natural-language) name
    - c) DoD standard data element name
    - d) Technical name (e.g., variable or field name in code or database)
    - e) Abbreviation or synonymous names
  - 2) Data type (alphanumeric, integer, etc.)
  - 3) Size and format (such as length and punctuation of a character string)
  - 4) Units of measurement (such as meters, dollars, nanoseconds)
  - 5) Range or enumeration of possible values (such as 0-99)
  - 6) Accuracy (how correct) and precision (number of significant digits)
  - 7) Priority, timing, frequency, volume, sequencing, and other constraints, such as whether the data element may be updated and whether business rules apply
  - 8) Security and privacy constraints
  - 9) Sources (setting/sending entities) and recipients (using/receiving entities)

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- d. Characteristics of data element assemblies (records, messages, files, arrays, displays, reports, etc.) that the interfacing entity(ies) will provide, store, send, access, receive, etc., such as:
  - 1) Names/identifiers
    - a) Project-unique identifier to be used for traceability.
    - b) Non-technical (natural language) name
    - c) Technical name (e.g., record or data structure name in code or database)
    - d) Abbreviations or synonymous names
  - 2) Data elements in the assembly and their structure (number, order, grouping)
  - 3) Medium (such as disk) and structure of data elements/assemblies on the medium
  - 4) Visual and auditory characteristics of displays and other outputs (such as colors, layouts, fonts, icons and other display elements, beeps, lights)
  - 5) Relationships among assemblies, such as sorting/access characteristics
  - 6) Priority, timing, frequency, volume, sequencing, and other constraints, such as whether the assembly may be updated and whether business rules apply
  - 7) Security and privacy constraints
  - 8) Sources (setting/sending entities) and recipients (using/receiving entities)
- e. Characteristics of communication methods that the interfacing entity(ies) will use for the interface, such as:
  - 1) Project-unique identifier(s)
  - 2) Communication links/bands/frequencies/media and their characteristics
  - 3) Message formatting
  - 4) Flow control (such as sequence numbering and buffer allocation)
  - 5) Data transfer rate, whether periodic/aperiodic, and interval between transfers
  - 6) Routing, addressing, and naming conventions
  - 7) Transmission services, including priority and grade
  - 8) Safety/security/privacy considerations, such as encryption, user authentication, compartmentalization, and auditing
- f. Characteristics of protocols that the interfacing entity(ies) will use for the interface, such as:
  - 1) Project-unique identifier(s)
  - 2) Priority/layer of the protocol
  - 3) Packeting, including fragmentation and reassembly, routing, and addressing
  - 4) Legality checks, error control, and recovery procedures
  - 5) Synchronization, including connection establishment, maintenance, termination
  - 6) Status, identification, and any other reporting features
- g. Other characteristics, such as physical compatibility of the interfacing entity(ies) (dimensions, tolerances, loads, voltages, plug compatibility, etc.)

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

5. Requirements traceability. This paragraph shall contain:

- a. Traceability from each system component identified in this SSDD to the system requirements allocated to it. (Alternatively, this traceability may be provided in 4.1.)
- b. Traceability from each system requirement to the system components to which it is allocated.

6. Notes: This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall contain an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendixes. Appendixes may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).



A03

<b>DATA ITEM DESCRIPTION</b>			Form Approved OMB NO. 0704-0188	
Public reporting burden for collection of this information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Operations and Reports, 1216 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. TITLE  <b>SYSTEM/SUBSYSTEM SPECIFICATION (SSS)</b>			2. IDENTIFICATION NUMBER  <b>DI-IPSC-81431</b>	
3. DESCRIPTION/PURPOSE  3.1 The System/Subsystem Specification (SSS) specifies the requirements for a system or subsystem and the methods to be used to ensure that each requirement has been met. Requirements pertaining to the system or subsystem's external interfaces may be presented in the SSS or in one or more Interface Requirements Specifications (IRs) (DI-IPSC-81434) referenced from the SSS.  3.2 The SSS, possibly supplemented by IRs, is used as the basis for design and qualification testing of a system or subsystem. Throughout this DID, the term "system" may be interpreted to mean "subsystem" as applicable. The resulting document should be titled System Specification or Subsystem Specification (SSS).				
4. APPROVAL DATE (YYMMDD) 941205	5. OFFICE OF PRIMARY RESPONSIBILITY EC	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE	
7. APPLICATION/INTERRELATIONSHIP  7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract.  7.2 This DID is used when the developer is tasked to define and record the requirements to be met by a system or subsystem.  7.3 Requirements pertaining to system or subsystem interfaces may be presented in the SSS or in IRs.  7.4 The Contract Data Requirements List (CDRL) (DD 1423) should specify whether deliverable data are to be delivered on paper or electronic media; are to be in a given electronic form (such as ASCII, CALS, or compatible with a specified word processor or other support software); may be delivered in developer format rather than in the format specified herein; and may reside in a computer-aided software engineering (CASE) or other automated tool rather than in the form of a traditional document.  7.5 This DID supersedes DI-CMAN-80008A and DI-IPSC-80690.				
8. APPROVAL LIMITATION Limited Approval from 12/5/94 through 12/5/96		9a. APPLICABLE FORMS	9b. AMSC NUMBER N7074	
10. PREPARATION INSTRUCTIONS  10.1 <u>General instructions.</u>  a. <u>Automated techniques.</u> Use of automated techniques is encouraged. The term "document" in this DID means a collection of data regardless of its medium.  b. <u>Alternate presentation styles.</u> Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles.  (Continued on Page 2)				
11. DISTRIBUTION STATEMENT  DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.				

System/Subsystem Specification (SSS)  
DI-IPSC-81431

10. PREPARATION INSTRUCTIONS -- 10.1 General Instructions (continued)

- c. Title page or identifier with signature blocks. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the system, subsystem, or item to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; distribution statement; and signature blocks for the developer representative authorized to release the document, the acquirer representative authorized to approve the document, and the dates of release/approval. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.
- d. Table of contents. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.
- e. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.
- f. Response to tailoring instructions. If a paragraph is tailored out of this DID, the resulting document shall contain the corresponding paragraph number and title, followed by "This paragraph has been tailored out." For data in a database or other alternative form, this representation need occur only in the table of contents or equivalent.
- g. Multiple paragraphs and subparagraphs. Any section, paragraph, or subparagraph in this DID may be written as multiple paragraphs or subparagraphs to enhance readability.
- h. Standard data descriptions. If a data description required by this DID has been published in a standard data element dictionary specified in the contract, reference to an entry in that dictionary is preferred over including the description itself.
- i. Substitution of existing documents. Commercial or other existing documents may be substituted for all or part of the document if they contain the required data.

10.2 Content requirements. Content requirements begin on the following page. The numbers shown designate the paragraph numbers to be used in the document. Each such number is understood to have the prefix "10.2" within this DID. For example, the paragraph numbered 1.1 is understood to be paragraph 10.2.1.1 within this DID.

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued).

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain a full identification of the system to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2 System overview. This paragraph shall briefly state the purpose of the system to which this document applies. It shall describe the general nature of the system; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 Document overview. This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this specification. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Requirements. This section shall be divided into the following paragraphs to specify the system requirements, that is, those characteristics of the system that are conditions for its acceptance. Each requirement shall be assigned a project-unique identifier to support testing and traceability and shall be stated in such a way that an objective test can be defined for it. Each requirement shall be annotated with associated qualification method(s) (see section 4) and, for subsystems, traceability to system requirements (see section 5.a), if not provided in those sections. The degree of detail to be provided shall be guided by the following rule: Include those characteristics of the system that are conditions for system acceptance; defer to design descriptions those characteristics that the acquirer is willing to leave up to the developer. If there are no requirements in a given paragraph, the paragraph shall so state. If a given requirement fits into more than one paragraph, it may be stated once and referenced from the other paragraphs.

3.1 Required states and modes. If the system is required to operate in more than one state or mode having requirements distinct from other states or modes, this paragraph shall identify and define each state and mode. Examples of states and modes include: idle, ready, active, post-use analysis, training, degraded, emergency, backup, wartime, peacetime. The distinction between states and modes is arbitrary. A system may be described in terms of states only, modes only, states within modes, modes within states, or any other scheme that is useful. If no states or modes are required, this paragraph shall so state, without the need to create artificial distinctions. If states and/or modes are required, each requirement or group of requirements in this specification shall be correlated to the states and modes. The correlation may be indicated by a table or other method in this paragraph, in an appendix referenced from this paragraph, or by annotation of the requirements in the paragraphs where they appear.

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

3.2 System capability requirements. This paragraph shall be divided into subparagraphs to itemize the requirements associated with each capability of the system. A "capability" is defined as a group of related requirements. The word "capability" may be replaced with "function," "subject," "object," or other term useful for presenting the requirements.

3.2.x (System capability). This paragraph shall identify a required system capability and shall itemize the requirements associated with the capability. If the capability can be more clearly specified by dividing it into constituent capabilities, the constituent capabilities shall be specified in subparagraphs. The requirements shall specify required behavior of the system and shall include applicable parameters, such as response times, throughput times, other timing constraints, sequencing, accuracy, capacities (how much/how many), priorities, continuous operation requirements, and allowable deviations based on operating conditions. The requirements shall include, as applicable, required behavior under unexpected, unallowed, or "out of bounds" conditions, requirements for error handling, and any provisions to be incorporated into the system to provide continuity of operations in the event of emergencies. Paragraph 3.3.x of this DID provides a list of topics to be considered when specifying requirements regarding inputs the system must accept and outputs it must produce.

3.3 System external interface requirements. This paragraph shall be divided into subparagraphs to specify the requirements, if any, for the system's external interfaces. This paragraph may reference one or more Interface Requirements Specifications (IRSs) or other documents containing these requirements.

3.3.1 Interface identification and diagrams. This paragraph shall identify the required external interfaces of the system. The identification of each interface shall include a project-unique identifier and shall designate the interfacing entities (systems, configuration items, users, etc.) by name, number, version, and documentation references, as applicable. The identification shall state which entities have fixed interface characteristics (and therefore impose interface requirements on interfacing entities) and which are being developed or modified (thus having interface requirements imposed on them). One or more interface diagrams shall be provided to depict the interfaces.

3.3.x (Project-unique identifier of interface). This paragraph (beginning with 3.3.2) shall identify a system external interface by project-unique identifier, shall briefly identify the interfacing entities, and shall be divided into subparagraphs as needed to state the requirements imposed on the system to achieve the interface. Interface characteristics of the other entities involved in the interface shall be stated as assumptions or as "When [the entity not covered] does this, the system shall..." not as requirements on the other entities. This paragraph may reference other documents (such as data dictionaries, standards for communication protocols, and standards for user interfaces) in place of stating the information here. The requirements shall include the following, as applicable, presented in any order suited to the requirements, and shall note any differences in these characteristics from the point of view of the interfacing entities (such as different expectations about the size, frequency, or other characteristics of data elements):

- a. Priority that the system must assign the interface

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- b. Requirements on the type of interface (such as real-time data transfer, storage-and-retrieval of data, etc.) to be implemented
- c. Required characteristics of individual data elements that the system must provide, store, send, access, receive, etc., such as:
  - 1) Names/identifiers
    - a) Project-unique identifier
    - b) Non-technical (natural-language) name
    - c) DoD standard data element name
    - d) Technical name (e.g., variable or field name in code or database)
    - e) Abbreviation or synonymous names
  - 2) Data type (alphanumeric, integer, etc.)
  - 3) Size and format (such as length and punctuation of a character string)
  - 4) Units of measurement (such as meters, dollars, nanoseconds)
  - 5) Range or enumeration of possible values (such as 0-99)
  - 6) Accuracy (how correct) and precision (number of significant digits)
  - 7) Priority, timing, frequency, volume, sequencing, and other constraints, such as whether the data element may be updated and whether business rules apply
  - 8) Security and privacy constraints
  - 9) Sources (setting/sending entities) and recipients (using/receiving entities)
- d. Required characteristics of data element assemblies (records, messages, files, arrays, displays, reports, etc.) that the system must provide, store, send, access, receive, etc., such as:
  - 1) Names/identifiers
    - a) Project-unique identifier
    - b) Non-technical (natural language) name
    - c) Technical name (e.g., record or data structure name in code or database)
    - d) Abbreviations or synonymous names
  - 2) Data elements in the assembly and their structure (number, order, grouping)
  - 3) Medium (such as disk) and structure of data elements/assemblies on the medium
  - 4) Visual and auditory characteristics of displays and other outputs (such as colors, layouts, fonts, icons and other display elements, beeps, lights)
  - 5) Relationships among assemblies, such as sorting/access characteristics
  - 6) Priority, timing, frequency, volume, sequencing, and other constraints, such as whether the assembly may be updated and whether business rules apply
  - 7) Security and privacy constraints
  - 8) Sources (setting/sending entities) and recipients (using/receiving entities)

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- e. Required characteristics of communication methods that the system must use for the interface, such as:
  - 1) Project-unique identifier(s)
  - 2) Communication links/bands/frequencies/media and their characteristics
  - 3) Message formatting
  - 4) Flow control (such as sequence numbering and buffer allocation)
  - 5) Data transfer rate, whether periodic/asynchronous, and interval between transfers
  - 6) Routing, addressing, and naming conventions
  - 7) Transmission services, including priority and grade
  - 8) Safety/security/privacy considerations, such as encryption, user authentication, compartmentalization, and auditing
- f. Required characteristics of protocols the system must use for the interface, such as:
  - 1) Project-unique identifier(s)
  - 2) Priority/layer of the protocol
  - 3) Packeting, including fragmentation and reassembly, routing, and addressing
  - 4) Legality checks, error control, and recovery procedures
  - 5) Synchronization, including connection establishment, maintenance, termination
  - 6) Status, identification, and any other reporting features
- g. Other required characteristics, such as physical compatibility of the interfacing entities (dimensions, tolerances, loads, plug compatibility, etc.), voltages, etc.

3.4 System internal interface requirements. This paragraph shall specify the requirements, if any, imposed on interfaces internal to the system. If all internal interfaces are left to the design or to requirement specifications for system components, this fact shall be so stated. If such requirements are to be imposed, paragraph 3.3 of this DID provides a list of topics to be considered.

3.5 System internal data requirements. This paragraph shall specify the requirements, if any, imposed on data internal to the system. Included shall be requirements, if any, on databases and data files to be included in the system. If all decisions about internal data are left to the design or to requirements specifications for system components, this fact shall be so stated. If such requirements are to be imposed, paragraphs 3.3.x.c and 3.3.x.d of this DID provide a list of topics to be considered.

3.6 Adaptation requirements. This paragraph shall specify the requirements, if any, concerning installation-dependent data that the system is required to provide (such as site-dependent latitude and longitude or site-dependent state tax codes) and operational parameters that the system is required to use that may vary according to operational needs (such as parameters indicating operation-dependent targeting constants or data recording).

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

3.7 Safety requirements. This paragraph shall specify the system requirements, if any, concerned with preventing or minimizing unintended hazards to personnel, property, and the physical environment. Examples include restricting the use of dangerous materials; classifying explosives for purposes of shipping, handling, and storing; abort/escape provisions from enclosures; gas detection and warning devices; grounding of electrical systems; decontamination; and explosion proofing. This paragraph shall include the system requirements, if any, for nuclear components, including, as applicable, requirements for component design, prevention of inadvertent detonation, and compliance with nuclear safety rules.

3.8 Security and privacy requirements. This paragraph shall specify the system requirements, if any, concerned with maintaining security and privacy. The requirements shall include, as applicable, the security/privacy environment in which the system must operate, the type and degree of security or privacy to be provided, the security/privacy risks the system must withstand, required safeguards to reduce those risks, the security/privacy policy that must be met, the security/privacy accountability the system must provide, and the criteria that must be met for security/privacy certification/accreditation.

3.9 System environment requirements. This paragraph shall specify the requirements, if any, regarding the environment in which the system must operate. Examples for a software system are the computer hardware and operating system on which the software must run. (Additional requirements concerning computer resources are given in the next paragraph). Examples for a hardware-software system include the environmental conditions that the system must withstand during transportation, storage, and operation, such as conditions in the natural environment (wind, rain, temperature, geographic location), the induced environment (motion, shock, noise, electromagnetic radiation), and environments due to enemy action (explosions, radiation).

3.10 Computer resource requirements. This paragraph shall be divided into the following subparagraphs. Depending upon the nature of the system, the computer resources covered in these subparagraphs may constitute the environment of the system (as for a software system) or components of the system (as for a hardware-software system).

3.10.1 Computer hardware requirements. This paragraph shall specify the requirements, if any, regarding computer hardware that must be used by, or incorporated into, the system. The requirements shall include, as applicable, number of each type of equipment, type, size, capacity, and other required characteristics of processors, memory, input/output devices, auxiliary storage, communications/network equipment, and other required equipment.

3.10.2 Computer hardware resource utilization requirements. This paragraph shall specify the requirements, if any, on the system's computer hardware resource utilization, such as maximum allowable use of processor capacity, memory capacity, input/output device capacity, auxiliary storage device capacity, and communications/network equipment capacity. The requirements (stated, for example, as percentages of the capacity of each computer hardware resource) shall include the conditions, if any, under which the resource utilization is to be measured.

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

3.10.3 Computer software requirements. This paragraph shall specify the requirements, if any, regarding computer software that must be used by, or incorporated into, the system. Examples include operating systems, database management systems, communications/network software, utility software, input and equipment simulators, test software, and manufacturing software. The correct nomenclature, version, and documentation references of each such software item shall be provided.

3.10.4 Computer communications requirements. This paragraph shall specify the additional requirements, if any, concerning the computer communications that must be used by, or incorporated into, the system. Examples include geographic locations to be linked; configuration and network topology; transmission techniques; data transfer rates; gateways; required system use times; type and volume of data to be transmitted/received; time boundaries for transmission/reception/response; peak volumes of data; and diagnostic features.

3.11 System quality factors. This paragraph shall specify the requirements, if any, pertaining to system quality factors. Examples include quantitative requirements concerning system functionality (the ability to perform all required functions), reliability (the ability to perform with correct, consistent results -- such as mean time between failure for equipment), maintainability (the ability to be easily serviced, repaired, or corrected), availability (the ability to be accessed and operated when needed), flexibility (the ability to be easily adapted to changing requirements), portability of software (the ability to be easily modified for a new environment), reusability (the ability to be used in multiple applications), testability (the ability to be easily and thoroughly tested), usability (the ability to be easily learned and used), and other attributes.

3.12 Design and construction constraints. This paragraph shall specify the requirements, if any, that constrain the design and construction of the system. For hardware-software systems, this paragraph shall include the physical requirements imposed on the system. These requirements may be specified by reference to appropriate commercial or military standards and specifications. Examples include requirements concerning:

- a. Use of a particular system architecture or requirements on the architecture, such as required subsystems; use of standard, military, or existing components; or use of Government/acquirer-furnished property (equipment, information, or software)
- b. Use of particular design or construction standards; use of particular data standards; use of a particular programming language; workmanship requirements and production techniques
- c. Physical characteristics of the system (such as weight limits, dimensional limits, color, protective coatings); interchangeability of parts; ability to be transported from one location to another; ability to be carried or set up by one, or a given number of, persons
- d. Materials that can and cannot be used; requirements on the handling of toxic materials; limits on the electromagnetic radiation that the system is permitted to generate



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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- e. Use of nameplates, part marking, serial and lot number marking, and other identifying markings
- f. Flexibility and expandability that must be provided to support anticipated areas of growth or changes in technology, threat, or mission

3.13 Personnel-related requirements. This paragraph shall specify the system requirements, if any, included to accommodate the number, skill levels, duty cycles, training needs, or other information about the personnel who will use or support the system. Examples include requirements for the number of work stations to be provided and for built-in help and training features. Also included shall be the human factors engineering requirements, if any, imposed on the system. These requirements shall include, as applicable, considerations for the capabilities and limitations of humans, foreseeable human errors under both normal and extreme conditions, and specific areas where the effects of human error would be particularly serious. Examples include requirements for adjustable-height work stations, color and duration of error messages, physical placement of critical indicators or buttons, and use of auditory signals.

3.14 Training-related requirements. This paragraph shall specify the system requirements, if any, pertaining to training. Examples include training devices and training materials to be included in the system.

3.15 Logistics-related requirements. This paragraph shall specify the system requirements, if any, concerned with logistics considerations. These considerations may include: system maintenance, software support, system transportation modes, supply-system requirements, impact on existing facilities, and impact on existing equipment.

3.16 Other requirements. This paragraph shall specify additional system requirements, if any, not covered in the previous paragraphs. Examples include requirements for system documentation, such as specifications, drawings, technical manuals, test plans and procedures, and installation instruction data, if not covered in other contractual documents.

3.17 Packaging requirements. This section shall specify the requirements, if any, for packaging, labeling, and handling the system and its components for delivery. Applicable military specifications and standards may be referenced if appropriate.

3.18 Precedence and criticality of requirements. This paragraph shall specify, if applicable, the order of precedence, criticality, or assigned weights indicating the relative importance of the requirements in this specification. Examples include identifying those requirements deemed critical to safety, to security, or to privacy for purposes of singling them out for special treatment. If all requirements have equal weight, this paragraph shall so state.

4. Qualification provisions. This section shall define a set of qualification methods and shall specify for each requirement in Section 3 the method(s) to be used to ensure that the requirement has been met. A table may be used to present this information, or each requirement in Section 3 may be annotated with the method(s) to be used. Qualification methods may include:

System/Subsystem Specification (SSS)  
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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- a. **Demonstration:** The operation of the system, or a part of the system, that relies on observable functional operation not requiring the use of instrumentation, special test equipment, or subsequent analysis.
- b. **Test:** The operation of the system, or a part of the system, using instrumentation or other special test equipment to collect data for later analysis.
- c. **Analysis:** The processing of accumulated data obtained from other qualification methods. Examples are reduction, interpolation, or extrapolation of test results.
- d. **Inspection:** The visual examination of system components, documentation, etc.
- e. **Special qualification methods.** Any special qualification methods for the system, such as special tools, techniques, procedures, facilities, acceptance limits, use of standard samples, preproduction or periodic production samples, pilot models, or pilot lots.

5. Requirements traceability. For system-level specifications, this paragraph does not apply. For subsystem-level specifications, this paragraph shall contain:

- a. Traceability from each subsystem requirement in this specification to the system requirements it addresses. (Alternatively, this traceability may be provided by annotating each requirement in Section 3.)

**Note:** Each level of system refinement may result in requirements not directly traceable to higher-level requirements. For example, a system architectural design that creates two subsystems may result in requirements about how the subsystems will interface, even though these interfaces are not covered in system requirements. Such requirements may be traced to a general requirement such as "system implementation" or to the system design decisions that resulted in their generation.

- b. Traceability from each system requirement that has been allocated to the subsystem covered by this specification to the subsystem requirements that address it. All system requirements allocated to the subsystem shall be accounted for. Those that trace to subsystem requirements contained in IRSs shall reference those IRSs.

6. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall contain an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendixes. Appendixes may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).

A004

<b>DATA ITEM DESCRIPTION</b>		Form Approved OMB NO. 0704-0188	
Public reporting burden for collection of this information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden to Washington Headquarters Service, Directorate of Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.			
<b>1. TITLE</b>  INTERFACE REQUIREMENTS SPECIFICATION (IRS)		<b>2. IDENTIFICATION NUMBER</b>  DI-IPSC-81434	
<b>3. DESCRIPTION/PURPOSE</b>  <p>3.1 The Interface Requirements Specification (IRS) specifies the requirements imposed on one or more systems, subsystems, Hardware Configuration Items (HWCI)s, Computer Software Configuration Items (CSCI)s, manual operations, or other system components to achieve one or more interfaces among these entities. An IRS can cover any number of interfaces.</p> <p>3.2 The IRS can be used to supplement the System/Subsystem Specification (SSS) (DI-IPSC-81431) and Software Requirements Specification (SRS) (DI-IPSC-81433) as the basis for design and qualification testing of systems and CSCI)s.</p>			
<b>4. APPROVAL DATE</b> (YYMMDD) 951205	<b>5. OFFICE OF PRIMARY RESPONSIBILITY</b> EC	<b>6a. DTIC APPLICABLE</b>	<b>6b. GIDEP APPLICABLE</b>
<b>7. APPLICATION/INTERRELATIONSHIP</b>  <p>7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract.</p> <p>7.2 This DID is used when the developer is tasked to define and record the interface requirements for one or more systems, subsystem, HWCI)s, CSCI)s, manual operations, or other system components.</p> <p>7.3 The IRS can be used to supplement the SSS and the SRS.</p> <p>7.4 The Contract Data Requirements List (CDRL) (DD 1423) should specify whether deliverable data are to be delivered on paper or electronic media; are to be in a given electronic form (such as ASCII, CALS, or compatible with a specified word processor or other support software); may be delivered in developer format rather than in the format specified herein; and may reside in a computer-aided software engineering (CASE) or other automated tool rather than in the form of a traditional document.</p> <p>7.5 This DID supersedes DI-MCCR-80026A and DI-MCCR-80303.</p>			
<b>8. APPROVAL LIMITATION</b> Limited Approval from 12/5/94 through 12/5/96	<b>9a. APPLICABLE FORMS</b>	<b>9b. AMSC NUMBER</b> N7077	
<b>10. PREPARATION INSTRUCTIONS</b>  <p>10.1 <u>General instructions.</u></p> <p>a. <u>Automated techniques.</u> Use of automated techniques is encouraged. The term "document" in this DID means a collection of data regardless of its medium.</p> <p>b. <u>Alternate presentation styles.</u> Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles.</p> <p style="text-align: right;">(Continued on Page 2)</p>			
<b>11. DISTRIBUTION STATEMENT</b>  DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.			

Interface Requirements Specification (IRS)  
DI-IPSC-81434

10. PREPARATION INSTRUCTIONS -- 10.1 General Instructions (continued)

- c. Title page or identifier with signature blocks. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the systems, subsystems, or items to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; distribution statement; and signature blocks for the developer representative authorized to release the document, the acquirer representative authorized to approve the document, and the dates of release/approval. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.
- d. Table of contents. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.
- e. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.
- f. Response to tailoring instructions. If a paragraph is tailored out of this DID, the resulting document shall contain the corresponding paragraph number and title, followed by "This paragraph has been tailored out." For data in a database or other alternative form, this representation need occur only in the table of contents or equivalent.
- g. Multiple paragraphs and subparagraphs. Any section, paragraph, or subparagraph in this DID may be written as multiple paragraphs or subparagraphs to enhance readability.
- h. Standard data descriptions. If a data description required by this DID has been published in a standard data element dictionary specified in the contract, reference to an entry in that dictionary is preferred over including the description itself.
- i. Substitution of existing documents. Commercial or other existing documents may be substituted for all or part of the document if they contain the required data.

10.2 Content requirements. Content requirements begin on the following page. The numbers shown designate the paragraph numbers to be used in the document. Each such number is understood to have the prefix "10.2" within this DID. For example, the paragraph numbered 1.1 is understood to be paragraph 10.2.1.1 within this DID.

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain a full identification of the systems, the interfacing entities, and the interfaces to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2 System overview. This paragraph shall briefly state the purpose of the system(s) and software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 Document overview. This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this specification. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Requirements. This section shall be divided into the following paragraphs to specify the requirements imposed on one or more systems, subsystems, configuration items, manual operations, or other system components to achieve one or more interfaces among these entities. Each requirement shall be assigned a project-unique identifier to support testing and traceability and shall be stated in such a way that an objective test can be defined for it. Each requirement shall be annotated with associated qualification method(s) (see section 4) and traceability to system (or subsystem, if applicable) requirements (see section 5.a) if not provided in those sections. The degree of detail to be provided shall be guided by the following rule: Include those characteristics of the interfacing entities that are conditions for their acceptance; defer to design descriptions those characteristics that the acquirer is willing to leave up to the developer. If a given requirement fits into more than one paragraph, it may be stated once and referenced from the other paragraphs. If an interfacing entity included in this specification will operate in states and/or modes having interface requirements different from other states and modes, each requirement or group of requirements for that entity shall be correlated to the states and modes. The correlation may be indicated by a table or other method in this paragraph, in an appendix referenced from this paragraph, or by annotation of the requirements in the paragraphs where they appear.

3.1 Interface identification and diagrams. For each interface identified in 1.1, this paragraph shall include a project-unique identifier and shall designate the interfacing entities (systems, configuration items, users, etc.) by name, number, version, and documentation references, as applicable. The identification shall state which entities have fixed interface characteristics (and therefore impose interface requirements on interfacing entities) and which are being developed or modified (thus having interface requirements imposed on them). One or more interface diagrams shall be provided to depict the interfaces.

3.x (Project-unique identifier of interface). This paragraph (beginning with 3.2) shall identify an interface by project-unique identifier, shall briefly identify the interfacing entities, and shall be divided into subparagraphs as needed to state the requirements imposed on one or more

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

of the interfacing entities to achieve the interface. If the interface characteristics of an entity are not covered by this IRS but need to be mentioned to specify the requirements for entities that are, those characteristics shall be stated as assumptions or as "When [the entity not covered] does this, the [entity being specified] shall..." rather than as requirements on the entities not covered by this IRS. This paragraph may reference other documents (such as data dictionaries, standards for communication protocols, and standards for user interfaces) in place of stating the information here. The requirements shall include the following, as applicable, presented in any order suited to the requirements, and shall note any differences in these characteristics from the point of view of the interfacing entities (such as different expectations about the size, frequency, or other characteristics of data elements):

- a. Priority that the interfacing entity(ies) must assign the interface
- b. Requirements on the type of interface (such as real-time data transfer, storage-and-retrieval of data, etc.) to be implemented
- c. Required characteristics of individual data elements that the interfacing entity(ies) must provide, store, send, access, receive, etc., such as:
  - 1) Names/identifiers
    - a) Project-unique identifier
    - b) Non-technical (natural-language) name
    - c) DoD standard data element name
    - d) Technical name (e.g., variable or field name in code or database)
    - e) Abbreviation or synonymous names
  - 2) Data type (alphanumeric, integer, etc.)
  - 3) Size and format (such as length and punctuation of a character string)
  - 4) Units of measurement (such as meters, dollars, nanoseconds)
  - 5) Range or enumeration of possible values (such as 0-99)
  - 6) Accuracy (how correct) and precision (number of significant digits)
  - 7) Priority, timing, frequency, volume, sequencing, and other constraints, such as whether the data element may be updated and whether business rules apply
  - 8) Security and privacy constraints
  - 9) Sources (setting/sending entities) and recipients (using/receiving entities)
- d. Required characteristics of data element assemblies (records, messages, files, arrays, displays, reports, etc.) that the interfacing entity(ies) must provide, store, send, access, receive, etc., such as:
  - 1) Names/identifiers
    - a) Project-unique identifier
    - b) Non-technical (natural language) name
    - c) Technical name (e.g., record or data structure name in code or database)
    - d) Abbreviations or synonymous names
  - 2) Data elements in the assembly and their structure (number, order, grouping)
  - 3) Medium (such as disk) and structure of data elements/assemblies on the medium

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- 4) Visual and auditory characteristics of displays and other outputs (such as colors, layouts, fonts, icons and other display elements, beeps, lights)
  - 5) Relationships among assemblies, such as sorting/access characteristics
  - 6) Priority, timing, frequency, volume, sequencing, and other constraints, such as whether the assembly may be updated and whether business rules apply
  - 7) Security and privacy constraints
  - 8) Sources (setting/sending entities) and recipients (using/receiving entities)
- e. Required characteristics of communication methods that the interfacing entity(ies) must use for the interface, such as:
- 1) Project-unique identifier(s)
  - 2) Communication links/bands/frequencies/media and their characteristics
  - 3) Message formatting
  - 4) Flow control (such as sequence numbering and buffer allocation)
  - 5) Data transfer rate, whether periodic/asynchronous, and interval between transfers
  - 6) Routing, addressing, and naming conventions
  - 7) Transmission services, including priority and grade
  - 8) Safety/security/privacy considerations, such as encryption, user authentication, compartmentalization, and auditing
- f. Required characteristics of protocols the interfacing entity(ies) must use for the interface, such as:
- 1) Project-unique identifier(s)
  - 2) Priority/layer of the protocol
  - 3) Packeting, including fragmentation and reassembly, routing, and addressing
  - 4) Legality checks, error control, and recovery procedures
  - 5) Synchronization, including connection establishment, maintenance, termination
  - 6) Status, identification, and any other reporting features
- g. Other required characteristics, such as physical compatibility of the interfacing entities (dimensions, tolerances, loads, plug compatibility, etc.), voltages, etc.

3.y Precedence and criticality of requirements. This paragraph shall be numbered as the last paragraph in Section 3 and shall specify, if applicable, the order of precedence, criticality, or assigned weights indicating the relative importance of the requirements in this specification. Examples include identifying those requirements deemed critical to safety, to security, or to privacy for purposes of singling them out for special treatment. If all requirements have equal weight, this paragraph shall so state.

4. Qualification provisions. This section shall define a set of qualification methods and shall specify, for each requirement in Section 3, the qualification method(s) to be used to ensure that the requirement has been met. A table may be used to present this information, or each requirement in Section 3 may be annotated with the method(s) to be used. Qualification methods may include:

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- a. **Demonstration:** The operation of interfacing entities that relies on observable functional operation not requiring the use of instrumentation, special test equipment, or subsequent analysis.
- b. **Test:** The operation of interfacing entities using instrumentation or special test equipment to collect data for later analysis.
- c. **Analysis:** The processing of accumulated data obtained from other qualification methods. Examples are reduction, interpretation, or extrapolation of test results.
- d. **Inspection:** The visual examination of interfacing entities, documentation, etc.
- e. **Special qualification methods:** Any special qualification methods for the interfacing entities, such as special tools, techniques, procedures, facilities, and acceptance limits.

5. Requirements traceability. For system-level interfacing entities, this paragraph does not apply. For each subsystem- or lower-level interfacing entity covered by this IRS, this paragraph shall contain:

- a. Traceability from each requirement imposed on the entity in this specification to the system (or subsystem, if applicable) requirements it addresses. (Alternatively, this traceability may be provided by annotating each requirement in Section 3.)

Note: Each level of system refinement may result in requirements not directly traceable to higher-level requirements. For example, a system architectural design that creates multiple CSCIs may result in requirements about how the CSCIs will interface, even though these interfaces are not covered in system requirements. Such requirements may be traced to a general requirement such as "system implementation" or to the system design decisions that resulted in their generation.

- b. Traceability from each system (or subsystem, if applicable) requirement that has been allocated to the interfacing entity and that affects an interface covered in this specification to the requirements in this specification that address it.

6. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendixes. Appendixes may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).



A005

<b>DATA ITEM DESCRIPTION</b>			Form Approved OMB NO. 0704-0188	
Public reporting burden for collection of the information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
<b>1. TITLE</b> <b>SOFTWARE REQUIREMENTS SPECIFICATION (SRS)</b>			<b>2. IDENTIFICATION NUMBER</b> <b>DI-IPSC-81433</b>	
<b>3. DESCRIPTION/PURPOSE</b>  <p>3.1 The Software Requirements Specification (SRS) specifies the requirements for a Computer Software Configuration Item (CSCI) and the methods to be used to ensure that each requirement has been met. Requirements pertaining to the CSCI's external interfaces may be presented in the SRS or in one or more Interface Requirements Specifications (IRSSs) (DI-IPSC-81434) referenced from the SRS.</p> <p>3.2 The SRS, possibly supplemented by IRSSs, is used as the basis for design and qualification testing of a CSCI.</p>				
<b>4. APPROVAL DATE</b> (YYMMDD) 941205	<b>5. OFFICE OF PRIMARY RESPONSIBILITY</b> EC	<b>6a. DTIC APPLICABLE</b>	<b>6b. GIDEP APPLICABLE</b>	
<b>7. APPLICATION/INTERRELATIONSHIP</b>  <p>7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract.</p> <p>7.2 This DID is used when the developer is tasked to define and record the software requirements to be met by a CSCI.</p> <p>7.3 Requirements pertaining to CSCI interfaces may be presented in the SRS or in IRSSs.</p> <p>7.4 The Contract Data Requirements List (CDRL) (DD 1423) should specify whether deliverable data are to be delivered on paper or electronic media; are to be in a given electronic form (such as ASCII, CALS, or compatible with a specified word processor or other support software); may be delivered in developer format rather than in the format specified herein; and may reside in a computer-aided software engineering (CASE) or other automated tool rather than in the form of a traditional document.</p> <p>7.5 This DID supersedes DI-MCCR-80025A and DI-MCCR-80301.</p>				
<b>8. APPROVAL LIMITATION</b> Limited Approval from 12/5/94 through 12/5/96		<b>9a. APPLICABLE FORMS</b>	<b>9b. AMSC NUMBER</b> N7076	
<b>10. PREPARATION INSTRUCTIONS</b>  <p>10.1 <u>General instructions.</u></p> <p>a. <u>Automated techniques.</u> Use of automated techniques is encouraged. The term "document" in this DID means a collection of data regardless of its medium.</p> <p>b. <u>Alternate presentation styles.</u> Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles.</p> <p style="text-align: right;">(Continued on Page 2)</p>				
<b>11. DISTRIBUTION STATEMENT</b> DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.				

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10. PREPARATION INSTRUCTIONS -- 10.1 General Instructions (continued)

- c. Title page or identifier with signature blocks. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the system, subsystem, or item to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; distribution statement; and signature blocks for the developer representative authorized to release the document, the acquirer representative authorized to approve the document, and the dates of release/approval. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.
  - d. Table of contents. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.
  - e. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.
  - f. Response to tailoring instructions. If a paragraph is tailored out of this DID, the resulting document shall contain the corresponding paragraph number and title, followed by "This paragraph has been tailored out." For data in a database or other alternative form, this representation need occur only in the table of contents or equivalent.
  - g. Multiple paragraphs and subparagraphs. Any section, paragraph, or subparagraph in this DID may be written as multiple paragraphs or subparagraphs to enhance readability.
  - h. Standard data descriptions. If a data description required by this DID has been published in a standard data element dictionary specified in the contract, reference to an entry in that dictionary is preferred over including the description itself.
  - i. Substitution of existing documents. Commercial or other existing documents may be substituted for all or part of the document if they contain the required data.
- 10.2 Content requirements. Content requirements begin on the following page. The numbers shown designate the paragraph numbers to be used in the document. Each such number is understood to have the prefix "10.2" within this DID. For example, the paragraph numbered 1.1 is understood to be paragraph 10.2.1.1 within this DID.

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain a full identification of the system and the software to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2 System overview. This paragraph shall briefly state the purpose of the system and the software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 Document overview. This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this specification. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Requirements. This section shall be divided into the following paragraphs to specify the CSCI requirements, that is, those characteristics of the CSCI that are conditions for its acceptance. CSCI requirements are software requirements generated to satisfy the system requirements allocated to this CSCI. Each requirement shall be assigned a project-unique identifier to support testing and traceability and shall be stated in such a way that an objective test can be defined for it. Each requirement shall be annotated with associated qualification method(s) (see section 4) and traceability to system (or subsystem, if applicable) requirements (see section 5.a) if not provided in those sections. The degree of detail to be provided shall be guided by the following rule: Include those characteristics of the CSCI that are conditions for CSCI acceptance; defer to design descriptions those characteristics that the acquirer is willing to leave up to the developer. If there are no requirements in a given paragraph, the paragraph shall so state. If a given requirement fits into more than one paragraph, it may be stated once and referenced from the other paragraphs.

3.1 Required states and modes. If the CSCI is required to operate in more than one state or mode having requirements distinct from other states or modes, this paragraph shall identify and define each state and mode. Examples of states and modes include: idle, ready, active, post-use analysis, training, degraded, emergency, backup, wartime, peacetime. The distinction between states and modes is arbitrary. A CSCI may be described in terms of states only, modes only, states within modes, modes within states, or any other scheme that is useful. If no states or modes are required, this paragraph shall so state, without the need to create artificial distinctions. If states and/or modes are required, each requirement or group of requirements in this specification shall be correlated to the states and modes. The correlation may be indicated by a table or other method in this paragraph, in an appendix referenced from this paragraph, or by annotation of the requirements in the paragraphs where they appear.

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

3.2 CSCI capability requirements. This paragraph shall be divided into subparagraphs to itemize the requirements associated with each capability of the CSCI. A "capability" is defined as a group of related requirements. The word "capability" may be replaced with "function," "subject," "object," or other term useful for presenting the requirements.

3.2.x (CSCI capability). This paragraph shall identify a required CSCI capability and shall itemize the requirements associated with the capability. If the capability can be more clearly specified by dividing it into constituent capabilities, the constituent capabilities shall be specified in subparagraphs. The requirements shall specify required behavior of the CSCI and shall include applicable parameters, such as response times, throughput times, other timing constraints, sequencing, accuracy, capacities (how much/how many), priorities, continuous operation requirements, and allowable deviations based on operating conditions. The requirements shall include, as applicable, required behavior under unexpected, unallowed, or "out of bounds" conditions, requirements for error handling, and any provisions to be incorporated into the CSCI to provide continuity of operations in the event of emergencies. Paragraph 3.3.x of this DID provides a list of topics to be considered when specifying requirements regarding inputs the CSCI must accept and outputs it must produce.

3.3 CSCI external interface requirements. This paragraph shall be divided into subparagraphs to specify the requirements, if any, for the CSCI's external interfaces. This paragraph may reference one or more Interface Requirements Specifications (IRSs) or other documents containing these requirements.

3.3.1 Interface identification and diagrams. This paragraph shall identify the required external interfaces of the CSCI (that is, relationships with other entities that involve sharing, providing or exchanging data). The identification of each interface shall include a project-unique identifier and shall designate the interfacing entities (systems, configuration items, users, etc.) by name, number, version, and documentation references, as applicable. The identification shall state which entities have fixed interface characteristics (and therefore impose interface requirements on interfacing entities) and which are being developed or modified (thus having interface requirements imposed on them). One or more interface diagrams shall be provided to depict the interfaces.

3.3.x (Project-unique identifier of interface). This paragraph (beginning with 3.3.2) shall identify a CSCI external interface by project-unique identifier, shall briefly identify the interfacing entities, and shall be divided into subparagraphs as needed to state the requirements imposed on the CSCI to achieve the interface. Interface characteristics of the other entities involved in the interface shall be stated as assumptions or as "When [the entity not covered] does this, the CSCI shall..." not as requirements on the other entities. This paragraph may reference other documents (such as data dictionaries, standards for communication protocols, and standards for user interfaces) in place of stating the information here. The requirements shall include the following, as applicable, presented in any order suited to the requirements, and shall note any differences in these characteristics from the point of view of the interfacing entities (such as different expectations about the size, frequency, or other characteristics of data elements):

- a. Priority that the CSCI must assign the interface

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- b. Requirements on the type of interface (such as real-time data transfer, storage-and-retrieval of data, etc.) to be implemented
- c. Required characteristics of individual data elements that the CSCI must provide, store, send, access, receive, etc., such as:
  - 1) Names/identifiers
    - a) Project-unique identifier
    - b) Non-technical (natural-language) name
    - c) DoD standard data element name
    - d) Technical name (e.g., variable or field name in code or database)
    - e) Abbreviation or synonymous names
  - 2) Data type (alphanumeric, integer, etc.)
  - 3) Size and format (such as length and punctuation of a character string)
  - 4) Units of measurement (such as meters, dollars, nanoseconds)
  - 5) Range or enumeration of possible values (such as 0-99)
  - 6) Accuracy (how correct) and precision (number of significant digits)
  - 7) Priority, timing, frequency, volume, sequencing, and other constraints, such as whether the data element may be updated and whether business rules apply
  - 8) Security and privacy constraints
  - 9) Sources (setting/sending entities) and recipients (using/receiving entities)
- d. Required characteristics of data element assemblies (records, messages, files, arrays, displays, reports, etc.) that the CSCI must provide, store, send, access, receive, etc., such as:
  - 1) Names/identifiers
    - a) Project-unique identifier
    - b) Non-technical (natural language) name
    - c) Technical name (e.g., record or data structure name in code or database)
    - d) Abbreviations or synonymous names
  - 2) Data elements in the assembly and their structure (number, order, grouping)
  - 3) Medium (such as disk) and structure of data elements/assemblies on the medium
  - 4) Visual and auditory characteristics of displays and other outputs (such as colors, layouts, fonts, icons and other display elements, beeps, lights)
  - 5) Relationships among assemblies, such as sorting/access characteristics
  - 6) Priority, timing, frequency, volume, sequencing, and other constraints, such as whether the assembly may be updated and whether business rules apply
  - 7) Security and privacy constraints
  - 8) Sources (setting/sending entities) and recipients (using/receiving entities)

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- e. Required characteristics of communication methods that the CSCI must use for the interface, such as:
  - 1) Project-unique identifier(s)
  - 2) Communication links/bands/frequencies/media and their characteristics
  - 3) Message formatting
  - 4) Flow control (such as sequence numbering and buffer allocation)
  - 5) Data transfer rate, whether periodic/aperiodic, and interval between transfers
  - 6) Routing, addressing, and naming conventions
  - 7) Transmission services, including priority and grade
  - 8) Safety/security/privacy considerations, such as encryption, user authentication, compartmentalization, and auditing
- f. Required characteristics of protocols the CSCI must use for the interface, such as:
  - 1) Project-unique identifier(s)
  - 2) Priority/layer of the protocol
  - 3) Packeting, including fragmentation and reassembly, routing, and addressing
  - 4) Legality checks, error control, and recovery procedures
  - 5) Synchronization, including connection establishment, maintenance, termination
  - 6) Status, identification, and any other reporting features
- g. Other required characteristics, such as physical compatibility of the interfacing entities (dimensions, tolerances, loads, plug compatibility, etc.), voltages, etc.

3.4 CSCI internal interface requirements. This paragraph shall specify the requirements, if any, imposed on interfaces internal to the CSCI. If all internal interfaces are left to the design, this fact shall be so stated. If such requirements are to be imposed, paragraph 3.3 of this DID provides a list of topics to be considered.

3.5 CSCI internal data requirements. This paragraph shall specify the requirements, if any, imposed on data internal to the CSCI. Included shall be requirements, if any, on databases and data files to be included in the CSCI. If all decisions about internal data are left to the design, this fact shall be so stated. If such requirements are to be imposed, paragraphs 3.3.x.c and 3.3.x.d of this DID provide a list of topics to be considered.

3.6 Adaptation requirements. This paragraph shall specify the requirements, if any, concerning installation-dependent data to be provided by the CSCI (such as site-dependent latitude and longitude or site-dependent state tax codes) and operational parameters that the CSCI is required to use that may vary according to operational needs (such as parameters indicating operation-dependent targeting constants or data recording).

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

**3.7 Safety requirements.** This paragraph shall specify the CSCI requirements, if any, concerned with preventing or minimizing unintended hazards to personnel, property, and the physical environment. Examples include safeguards the CSCI must provide to prevent inadvertent actions (such as accidentally issuing an "auto pilot off" command) and non-actions (such as failure to issue an intended "auto pilot off" command). This paragraph shall include the CSCI requirements, if any, regarding nuclear components of the system, including, as applicable, prevention of inadvertent detonation and compliance with nuclear safety rules..

**3.8 Security and privacy requirements.** This paragraph shall specify the CSCI requirements, if any, concerned with maintaining security and privacy. These requirements shall include, as applicable, the security/privacy environment in which the CSCI must operate, the type and degree of security or privacy to be provided, the security/privacy risks the CSCI must withstand, required safeguards to reduce those risks, the security/privacy policy that must be met, the security/privacy accountability the CSCI must provide, and the criteria that must be met for security/privacy certification/accreditation.

**3.9 CSCI environment requirements.** This paragraph shall specify the requirements, if any, regarding the environment in which the CSCI must operate. Examples include the computer hardware and operating system on which the CSCI must run. (Additional requirements concerning computer resources are given in the next paragraph.)

**3.10 Computer resource requirements.** This paragraph shall be divided into the following subparagraphs.

**3.10.1 Computer hardware requirements.** This paragraph shall specify the requirements, if any, regarding computer hardware that must be used by the CSCI. The requirements shall include, as applicable, number of each type of equipment, type, size, capacity, and other required characteristics of processors, memory, input/output devices, auxiliary storage, communications/network equipment, and other required equipment.

**3.10.2 Computer hardware resource utilization requirements.** This paragraph shall specify the requirements, if any, on the CSCI's computer hardware resource utilization, such as maximum allowable use of processor capacity, memory capacity, input/output device capacity, auxiliary storage device capacity, and communications/network equipment capacity. The requirements (stated, for example, as percentages of the capacity of each computer hardware resource) shall include the conditions, if any, under which the resource utilization is to be measured.

**3.10.3 Computer software requirements.** This paragraph shall specify the requirements, if any, regarding computer software that must be used by, or incorporated into, the CSCI. Examples include operating systems, database management systems, communications/network software, utility software, input and equipment simulators, test software, and manufacturing software. The correct nomenclature, version, and documentation references of each such software item shall be provided.

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

3.10.4 Computer communications requirements. This paragraph shall specify the additional requirements, if any, concerning the computer communications that must be used by the CSCI. Examples include geographic locations to be linked; configuration and network topology; transmission techniques; data transfer rates; gateways; required system use times; type and volume of data to be transmitted/received; time boundaries for transmission/reception/response; peak volumes of data; and diagnostic features.

3.11 Software quality factors. This paragraph shall specify the CSCI requirements, if any, concerned with software quality factors identified in the contract or derived from a higher level specification. Examples include quantitative requirements regarding CSCI functionality (the ability to perform all required functions), reliability (the ability to perform with correct, consistent results), maintainability (the ability to be easily corrected), availability (the ability to be accessed and operated when needed), flexibility (the ability to be easily adapted to changing requirements), portability (the ability to be easily modified for a new environment), reusability (the ability to be used in multiple applications), testability (the ability to be easily and thoroughly tested), usability (the ability to be easily learned and used), and other attributes.

3.12 Design and implementation constraints. This paragraph shall specify the requirements, if any, that constrain the design and implementation of the CSCI. These requirements may be specified by reference to appropriate commercial or military standards and specifications. Examples include requirements concerning:

- a. Use of a particular CSCI architecture or requirements on the architecture, such as required databases or other software units; use of standard, military, or existing components; or use of Government/acquirer-furnished property (equipment, information, or software)
- b. Use of particular design or implementation standards; use of particular data standards; use of a particular programming language
- c. Flexibility and expandability that must be provided to support anticipated areas of growth or changes in technology, threat, or mission

3.13 Personnel-related requirements. This paragraph shall specify the CSCI requirements, if any, included to accommodate the number, skill levels, duty cycles, training needs, or other information about the personnel who will use or support the CSCI. Examples include requirements for number of simultaneous users and for built-in help or training features. Also included shall be the human factors engineering requirements, if any, imposed on the CSCI. These requirements shall include, as applicable, considerations for the capabilities and limitations of humans; foreseeable human errors under both normal and extreme conditions; and specific areas where the effects of human error would be particularly serious. Examples include requirements for color and duration of error messages, physical placement of critical indicators or keys, and use of auditory signals.

3.14 Training-related requirements. This paragraph shall specify the CSCI requirements, if any, pertaining to training. Examples include training software to be included in the CSCI.



Software Requirements Specification (SRS)  
DI-IPSC-81433

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

3.15 Logistics-related requirements. This paragraph shall specify the CSCI requirements, if any, concerned with logistics considerations. These considerations may include: system maintenance, software support, system transportation modes, supply-system requirements, impact on existing facilities, and impact on existing equipment.

3.16 Other requirements. This paragraph shall specify additional CSCI requirements, if any, not covered in the previous paragraphs.

3.17 Packaging requirements. This section shall specify the requirements, if any, for packaging, labeling, and handling the CSCI for delivery (for example, delivery on 8 track magnetic tape labelled and packaged in a certain way). Applicable military specifications and standards may be referenced if appropriate.

3.18 Precedence and criticality of requirements. This paragraph shall specify, if applicable, the order of precedence, criticality, or assigned weights indicating the relative importance of the requirements in this specification. Examples include identifying those requirements deemed critical to safety, to security, or to privacy for purposes of singling them out for special treatment. If all requirements have equal weight, this paragraph shall so state.

4. Qualification provisions. This section shall define a set of qualification methods and shall specify for each requirement in Section 3 the method(s) to be used to ensure that the requirement has been met. A table may be used to present this information, or each requirement in Section 3 may be annotated with the method(s) to be used. Qualification methods may include:

- a. Demonstration: The operation of the CSCI, or a part of the CSCI, that relies on observable functional operation not requiring the use of instrumentation, special test equipment, or subsequent analysis.
- b. Test: The operation of the CSCI, or a part of the CSCI, using instrumentation or other special test equipment to collect data for later analysis.
- c. Analysis: The processing of accumulated data obtained from other qualification methods. Examples are reduction, interpretation, or extrapolation of test results.
- d. Inspection: The visual examination of CSCI code, documentation, etc.
- e. Special qualification methods: Any special qualification methods for the CSCI, such as special tools, techniques, procedures, facilities, and acceptance limits.

5. Requirements traceability. This paragraph shall contain:

- a. Traceability from each CSCI requirement in this specification to the system (or subsystem, if applicable) requirements it addresses. (Alternatively, this traceability may be provided by annotating each requirement in Section 3.)

Software Requirements Specification (SRS)  
DI-IPSC-81433

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

Note: Each level of system refinement may result in requirements not directly traceable to higher-level requirements. For example, a system architectural design that creates multiple CSCIs may result in requirements about how the CSCIs will interface, even though these interfaces are not covered in system requirements. Such requirements may be traced to a general requirement such as "system implementation" or to the system design decisions that resulted in their generation.

- b. Traceability from each system (or subsystem, if applicable) requirement allocated to this CSCI to the CSCI requirements that address it. All system (subsystem) requirements allocated to this CSCI shall be accounted for. Those that trace to CSCI requirements contained in IRSs shall reference those IRSs.

6. Notes. This section shall contain any general information that aids in understanding this specification (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendixes. Appendixes may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).

A006

DATA ITEM DESCRIPTION			Form Approved OMB NO. 0704-0188	
Public reporting burden for collection of this information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. TITLE <b>SOFTWARE USER MANUAL (SUM)</b>			2. IDENTIFICATION NUMBER <b>DI-IPSC-81443</b>	
3. DESCRIPTION/PURPOSE  3.1 The Software User Manual (SUM) tells a hands-on software user how to install and use a Computer Software Configuration Item (CSCI), a group of related CSCIs, or a software system or subsystem. It may also cover a particular aspect of software operation, such as instructions for a particular position or task.  3.2 The SUM is developed for software that is run by the user and has a user interface requiring on-line user input or interpretation of displayed output. If the software is embedded in a hardware-software system, user manuals or operating procedures for that system may make separate SUMs unnecessary.				
4. APPROVAL DATE (YYYYMMDD) <b>941205</b>	5. OFFICE OF PRIMARY RESPONSIBILITY <b>EC</b>	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE	
7. APPLICATION/INTERRELATIONSHIP  7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract.  7.2 This DID is used when the developer is tasked to identify and record information needed by hands-on users of software.  7.3 The SUM is an alternative to the Software Input/Output Manual (SIOM) (DI-IPSC-81445) and Software Center Operator Manual (SCOM) (DI-IPSC-81444).  7.4 The Contract Data Requirements List (CDRL) (DD 1423) should specify whether deliverable data are to be delivered on paper or electronic media; are to be in a given electronic form (such as ASCII, CALS, or compatible with a specified word processor or other support software); may be delivered in developer format rather than in the format specified herein; and may reside in a computer-aided software engineering (CASE) or other automated tool rather than in the form of a traditional document.  7.5 This DID supersedes DI-MCCR-80019A, DI-IPSC-80694, DI-MCCR-80313, DI-MCCR-80314, and DI-MCCR-80315.				
8. APPROVAL LIMITATION Limited Approval from 12/5/94 through 12/5/96		9a. APPLICABLE FORMS	9b. AMSC NUMBER <b>N7086</b>	
10. PREPARATION INSTRUCTIONS  10.1 <u>General instructions.</u>  a. <u>Automated techniques.</u> Use of automated techniques is encouraged. The term "document" in this DID means a collection of data regardless of its medium.  b. <u>Alternate presentation styles.</u> Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles.  (Continued on Page 2)				
11. DISTRIBUTION STATEMENT <b>DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.</b>				

Software User Manual (SUM)  
DI-IPSC-81443

10. PREPARATION INSTRUCTIONS -- 10.1 General Instructions (continued)

- c. Title page or identifier. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the system, subsystem, or item to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; and distribution statement. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.
- d. Table of contents and index. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix, and an index providing an alphabetic listing of key terms and concepts covered in the document and the pages or paragraphs in which the terms or concepts are covered. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.
- e. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.
- f. Response to tailoring instructions. If a paragraph is tailored out of this DID, the resulting document shall contain the corresponding paragraph number and title, followed by "This paragraph has been tailored out." For data in a database or other alternative form, this representation need occur only in the table of contents or equivalent.
- g. Multiple paragraphs and subparagraphs. Any section, paragraph, or subparagraph in this DID may be written as multiple paragraphs or subparagraphs to enhance readability.
- h. Standard data descriptions. If a data description required by this DID has been published in a standard data element dictionary specified in the contract, reference to an entry in that dictionary is preferred over including the description itself.
- i. Substitution of existing documents. Commercial or other existing documents may be substituted for all or part of the document if they contain the required data.

10.2 Content requirements. Content requirements begin on the following page. The numbers shown designate the paragraph numbers to be used in the document. Each such number is understood to have the prefix "10.2" within this DID. For example, the paragraph numbered 1.1 is understood to be paragraph 10.2.1.1 within this DID.

Software User Manual (SUM)  
DI-IPSC-81443

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain a full identification of the system and the software to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2 System overview. This paragraph shall briefly state the purpose of the system and the software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 Document overview. This paragraph shall summarize the purpose and contents of this manual and shall describe any security or privacy considerations associated with its use.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this manual. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Software summary. This section shall be divided into the following paragraphs.

3.1 Software application. This paragraph shall provide a brief description of the intended uses of the software. Capabilities, operating improvements, and benefits expected from its use shall be described.

3.2 Software inventory. This paragraph shall identify all software files, including databases and data files, that must be installed for the software to operate. The identification shall include security and privacy considerations for each file and identification of the software necessary to continue or resume operation in case of an emergency.

3.3 Software environment. This paragraph shall identify the hardware, software, manual operations, and other resources needed for a user to install and run the software. Included, as applicable, shall be identification of:

- a. Computer equipment that must be present, including amount of memory needed, amount of auxiliary storage needed, and peripheral equipment such as printers and other input/output devices
- b. Communications equipment that must be present
- c. Other software that must be present, such as operating systems, databases, data files, utilities, and other supporting systems
- d. Forms, procedures, or other manual operations that must be present
- e. Other facilities, equipment, or resources that must be present

3.4 Software organization and overview of operation. This paragraph shall provide a brief description of the organization and operation of the software from the user's point of view. The description shall include, as applicable:

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DI-IPSC-81443

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- a. Logical components of the software, from the user's point of view, and an overview of the purpose/operation of each component
- b. Performance characteristics that can be expected by the user, such as:
  - 1) Types, volumes, rate of inputs accepted
  - 2) Types, volume, accuracy, rate of outputs that the software can produce
  - 3) Typical response time and factors that affect it
  - 4) Typical processing time and factors that affect it
  - 5) Limitations, such as number of events that can be tracked
  - 6) Error rate that can be expected
  - 7) Reliability that can be expected
- c. Relationship of the functions performed by the software with interfacing systems, organizations, or positions
- d. Supervisory controls that can be implemented (such as passwords) to manage the software

3.5 Contingencies and alternate states and modes of operation. This paragraph shall explain differences in what the user will be able to do with the software at times of emergency and in various states and modes of operation, if applicable.

3.6 Security and privacy. This paragraph shall contain an overview of the security and privacy considerations associated with the software. A warning shall be included regarding making unauthorized copies of software or documents, if applicable.

3.7 Assistance and problem reporting. This paragraph shall identify points of contact and procedures to be followed to obtain assistance and report problems encountered in using the software.

4. Access to the software. This section shall contain step-by-step procedures oriented to the first time/occasional user. Enough detail shall be presented so that the user can reliably access the software before learning the details of its functional capabilities. Safety precautions, marked by WARNING or CAUTION, shall be included where applicable.

4.1 First-time user of the software. This paragraph shall be divided into the following subparagraphs.

4.1.1 Equipment familiarization. This paragraph shall describe the following as appropriate:

- a. Procedures for turning on power and making adjustments
- b. Dimensions and capabilities of the visual display screen
- c. Appearance of the cursor, how to identify an active cursor if more than one cursor can appear, how to position a cursor, and how to use a cursor
- d. Keyboard layout and role of different types of keys and pointing devices
- e. Procedures for turning power off if special sequencing of operations is needed

Software User Manual (SUM)  
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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

4.1.2 Access control. This paragraph shall present an overview of the access and security features of the software that are visible to the user. The following items shall be included, as applicable:

- a. How and from whom to obtain a password
- b. How to add, delete, or change passwords under user control.
- c. Security and privacy considerations pertaining to the storage and marking of output reports and other media that the user will generate

4.1.3 Installation and setup. This paragraph shall describe any procedures that the user must perform to be identified or authorized to access or install software on the equipment, to perform the installation, to configure the software, to delete or overwrite former files or data, and to enter parameters for software operation.

4.2 Initiating a session. This paragraph shall provide step-by-step procedures for beginning work, including any options available. A checklist for problem determination shall be included in case difficulties are encountered.

4.3 Stopping and suspending work. This paragraph shall describe how the user can cease or interrupt use of the software and how to determine whether normal termination or cessation has occurred.

5. Processing reference guide. This section shall provide the user with procedures for using the software. If procedures are complicated or extensive, additional Sections 6, 7, ... may be added in the same paragraph structure as this section and with titles meaningful to the sections selected. The organization of the document will depend on the characteristics of the software being documented. For example, one approach is to base the sections on the organizations in which users work, their assigned positions, their work sites, or the tasks they must perform. For other software, it may be more appropriate to have Section 5 be a guide to menus, Section 6 be a guide to the command language used, and Section 7 be a guide to functions. Detailed procedures are intended to be presented in subparagraphs of paragraph 5.3. Depending on the design of the software, the subparagraphs might be organized on a function-by-function, menu-by-menu, transaction-by-transaction, or other basis. Safety precautions, marked by WARNING or CAUTION, shall be included where applicable.

5.1 Capabilities. This paragraph shall briefly describe the interrelationships of the transactions, menus, functions, or other processes in order to provide an overview of the use of the software.

5.2 Conventions. This paragraph shall describe any conventions used by the software, such as the use of colors in displays, the use of audible alarms, the use of abbreviated vocabulary, and the use of rules for assigning names or codes.

5.3 Processing procedures. This paragraph shall explain the organization of subsequent paragraphs, e.g., by function, by menu, by screen. Any necessary order in which procedures must be accomplished shall be described.

Software User Manual (SUM)  
DI-IPSC-81443

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

5.3.x (Aspect of software use). The title of this paragraph shall identify the function, menu, transaction, or other process being described. This paragraph shall describe and give options and examples, as applicable, of menus, graphical icons, data entry forms, user inputs, inputs from other software or hardware that may affect the software's interface with the user, outputs, diagnostic or error messages or alarms, and help facilities that can provide on-line descriptive or tutorial information. The format for presenting this information can be adapted to the particular characteristics of the software, but a consistent style of presentation shall be used, i.e., the descriptions of menus shall be consistent, the descriptions of transactions shall be consistent among themselves.

5.4 Related processing. This paragraph shall identify and describe any related batch, offline, or background processing performed by the software that is not invoked directly by the user and is not described in paragraph 5.3. Any user responsibilities to support this processing shall be specified.

5.5 Data backup. This paragraph shall describe procedures for creating and retaining backup data that can be used to replace primary copies of data in event of errors, defects, malfunctions, or accidents.

5.6 Recovery from errors, malfunctions, and emergencies. This paragraph shall present detailed procedures for restart or recovery from errors or malfunctions occurring during processing and for ensuring continuity of operations in the event of emergencies.

5.7 Messages. This paragraph shall list, or refer to an appendix that lists, all error messages, diagnostic messages, and information messages that can occur while accomplishing any of the user's functions. The meaning of each message and the action that should be taken after each such message shall be identified and described.

5.8 Quick-reference guide. If appropriate to the software, this paragraph shall provide or reference a quick-reference card or page for using the software. This quick-reference guide shall summarize, as applicable, frequently-used function keys, control sequences, formats, commands, or other aspects of software use.

6. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of terms and definitions needed to understand this document. If section 5 has been expanded into section(s) 6, ..., this section shall be numbered as the next section following section n.

A. Appendixes. Appendixes may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).



AOLY

<b>DATA ITEM DESCRIPTION</b>		Form Approved OMB NO. 0704-0188	
Public reporting burden for collection of this information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.			
<b>1. TITLE</b> <b>SOFTWARE DESIGN DESCRIPTION (SDD)</b>		<b>2. IDENTIFICATION NUMBER</b> <b>DI-IPSC-81435</b>	
<b>3. DESCRIPTION/PURPOSE</b>  <p>3.1 The Software Design Description (SDD) describes the design of a Computer Software Configuration Item (CSCI). It describes the CSCI-wide design decisions, the CSCI architectural design, and the detailed design needed to implement the software. The SDD may be supplemented by Interface Design Descriptions (IDDs) (DI-IPSC-81436) and Database Design Descriptions (DBDDs) (DI-IPSC-81437) as described in Block 7 below.</p> <p>3.2 The SDD, with its associated IDD and DBDDs, is used as the basis for implementing the software. It provides the acquirer visibility into the design and provides information needed for software support.</p>			
<b>4. APPROVAL DATE</b> (YYMMDD) 941205	<b>5. OFFICE OF PRIMARY RESPONSIBILITY</b> EC	<b>6a. DTIC APPLICABLE</b>	<b>6b. GIDEP APPLICABLE</b>
<b>7. APPLICATION/INTERRELATIONSHIP</b>  <p>7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract.</p> <p>7.2 This DID is used when the developer is tasked to define and record the design of a CSCI.</p> <p>7.3 Design pertaining to interfaces may be presented in the SDD or in IDD. Design pertaining to databases may be presented in the SDD or in DBDDs.</p> <p>7.4 The Contract Data Requirements List (CDRL) (DD 1423) should specify whether deliverable data are to be delivered on paper or electronic media; are to be in a given electronic form (such as ASCII, CALS, or compatible with a specified word processor or other support software); may be delivered in developer format rather than in the format specified herein; and may reside in a computer-aided software engineering (CASE) or other automated tool rather than in the form of a traditional document.</p> <p>7.5 This DID supersedes DI-MCCR-80012A, DI-IPSC-80691, DI-MCCR-80304, and DI-MCCR-80306.</p>			
<b>8. APPROVAL LIMITATION</b> Limited Approval from 12/5/94 through 12/5/96	<b>9a. APPLICABLE FORMS</b>	<b>9b. AMSC NUMBER</b> N7078	
<b>10. PREPARATION INSTRUCTIONS</b>  <p>10.1 <u>General instructions.</u></p> <p>a. <u>Automated techniques.</u> Use of automated techniques is encouraged. The term "document" in this DID means a collection of data regardless of its medium.</p> <p>b. <u>Alternate presentation styles.</u> Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles.</p> <p style="text-align: right;">(Continued on Page 2)</p>			
<b>11. DISTRIBUTION STATEMENT</b> <b>DISTRIBUTION STATEMENT A.</b> Approved for public release; distribution is unlimited.			

Software Design Description (SDD)  
DI-IPSC-81435

10. PREPARATION INSTRUCTIONS -- 10.1 General Instructions (continued)

- c. Title page or identifier. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the system, subsystem, or item to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; and distribution statement. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.
- d. Table of contents. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.
- e. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.
- f. Response to tailoring instructions. If a paragraph is tailored out of this DID, the resulting document shall contain the corresponding paragraph number and title, followed by "This paragraph has been tailored out." For data in a database or other alternative form, this representation need occur only in the table of contents or equivalent.
- g. Multiple paragraphs and subparagraphs. Any section, paragraph, or subparagraph in this DID may be written as multiple paragraphs or subparagraphs to enhance readability.
- h. Standard data descriptions. If a data description required by this DID has been published in a standard data element dictionary specified in the contract, reference to an entry in that dictionary is preferred over including the description itself.
- i. Substitution of existing documents. Commercial or other existing documents may be substituted for all or part of the document if they contain the required data.

10.2 Content requirements. Content requirements begin on the following page. The numbers shown designate the paragraph numbers to be used in the document. Each such number is understood to have the prefix "10.2" within this DID. For example, the paragraph numbered 1.1 is understood to be paragraph 10.2.1.1 within this DID.

Software Design Description (SDD)  
DI-IPSC-81435

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain a full identification of the system and the software to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2 System overview. This paragraph shall briefly state the purpose of the system and the software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 Document overview. This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this document. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. CSCI-wide design decisions. This section shall be divided into paragraphs as needed to present CSCI-wide design decisions, that is, decisions about the CSCI's behavioral design (how it will behave, from a user's point of view, in meeting its requirements, ignoring internal implementation) and other decisions affecting the selection and design of the software units that make up the CSCI. If all such decisions are explicit in the CSCI requirements or are deferred to the design of the CSCI's software units, this section shall so state. Design decisions that respond to requirements designated critical, such as those for safety, security, or privacy, shall be placed in separate subparagraphs. If a design decision depends upon system states or modes, this dependency shall be indicated. Design conventions needed to understand the design shall be presented or referenced. Examples of CSCI-wide design decisions are the following:

- a. Design decisions regarding inputs the CSCI will accept and outputs it will produce, including interfaces with other systems, HWCIs, CSCIs, and users (4.3.x of this DID identifies topics to be considered in this description). If part or all of this information is given in Interface Design Descriptions (IDDs), they may be referenced.
- b. Design decisions on CSCI behavior in response to each input or condition, including actions the CSCI will perform, response times and other performance characteristics, description of physical systems modeled, selected equations/algorithms/rules, and handling of unallowed inputs or conditions.
- c. Design decisions on how databases/data files will appear to the user (4.3.x of this DID identifies topics to be considered in this description). If part or all of this information is given in Database Design Descriptions (DBDDs), they may be referenced.
- d. Selected approach to meeting safety, security, and privacy requirements.

Software Design Description (SDD)  
DI-IPSC-81435

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- e. Other CSCI-wide design decisions made in response to requirements, such as selected approach to providing required flexibility, availability, and maintainability.

4. CSCI architectural design. This section shall be divided into the following paragraphs to describe the CSCI architectural design. If part or all of the design depends upon system states or modes, this dependency shall be indicated. If design information falls into more than one paragraph, it may be presented once and referenced from the other paragraphs. Design conventions needed to understand the design shall be presented or referenced.

4.1 CSCI components. This paragraph shall:

- a. Identify the software units that make up the CSCI. Each software unit shall be assigned a project-unique identifier.

Note: A software unit is an element in the design of a CSCI; for example, a major subdivision of a CSCI, a component of that subdivision, a class, object, module, function, routine, or database. Software units may occur at different levels of a hierarchy and may consist of other software units. Software units in the design may or may not have a one-to-one relationship with the code and data entities (routines, procedures, databases, data files, etc.) that implement them or with the computer files containing those entities. A database may be treated as a CSCI or as a software unit. The SDD may refer to software units by any name(s) consistent with the design methodology being used.

- b. Show the static (such as "consists of") relationship(s) of the software units. Multiple relationships may be presented, depending on the selected software design methodology (for example, in an object-oriented design, this paragraph may present the class and object structures as well as the module and process architectures of the CSCI).
- c. State the purpose of each software unit and identify the CSCI requirements and CSCI-wide design decisions allocated to it. (Alternatively, the allocation of requirements may be provided in 6.a.)
- d. Identify each software unit's development status/type (such as new development, existing design or software to be reused as is, existing design or software to be reengineered, software to be developed for reuse, software planned for Build N, etc.) For existing design or software, the description shall provide identifying information, such as name, version, documentation references, library, etc.
- e. Describe the CSCI's (and as applicable, each software unit's) planned utilization of computer hardware resources (such as processor capacity, memory capacity, input/output device capacity, auxiliary storage capacity, and communications/network equipment capacity). The description shall cover all computer hardware resources included in resource utilization requirements for the CSCI, in system-level resource allocations affecting the CSCI, and in resource utilization measurement planning in the Software Development Plan. If all utilization data for a given computer hardware resource are presented in a single location, such as in one SDD, this paragraph may reference that source. Included for each computer hardware resource shall be:

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- 1) The CSCI requirements or system-level resource allocations being satisfied
  - 2) The assumptions and conditions on which the utilization data are based (for example, typical usage, worst-case usage, assumption of certain events)
  - 3) Any special considerations affecting the utilization (such as use of virtual memory, overlays, or multiprocessors or the impacts of operating system overhead, library software, or other implementation overhead)
  - 4) The units of measure used (such as percentage of processor capacity, cycles per second, bytes of memory, kilobytes per second)
  - 5) The level(s) at which the estimates or measures will be made (such as software unit, CSCI, or executable program)
- f. Identify the program library in which the software that implements each software unit is to be placed

**4.2 Concept of execution.** This paragraph shall describe the concept of execution among the software units. It shall include diagrams and descriptions showing the dynamic relationship of the software units, that is, how they will interact during CSCI operation, including, as applicable, flow of execution control, data flow, dynamically controlled sequencing, state transition diagrams, timing diagrams, priorities among units, handling of interrupts, timing/sequencing relationships, exception handling, concurrent execution, dynamic allocation/deallocation, dynamic creation/deletion of objects, processes, tasks, and other aspects of dynamic behavior.

**4.3 Interface design.** This paragraph shall be divided into the following subparagraphs to describe the interface characteristics of the software units. It shall include both interfaces among the software units and their interfaces with external entities such as systems, configuration items, and users. If part or all of this information is contained in Interface Design Descriptions (IDDs), in section 5 of the SDD, or elsewhere, these sources may be referenced.

**4.3.1 Interface identification and diagrams.** This paragraph shall state the project-unique identifier assigned to each interface and shall identify the interfacing entities (software units, systems, configuration items, users, etc.) by name, number, version, and documentation references, as applicable. The identification shall state which entities have fixed interface characteristics (and therefore impose interface requirements on interfacing entities) and which are being developed or modified (thus having interface requirements imposed on them). One or more interface diagrams shall be provided, as appropriate, to depict the interfaces.

**4.3.x (Project-unique identifier of interface).** This paragraph (beginning with 4.3.2) shall identify an interface by project-unique identifier, shall briefly identify the interfacing entities, and shall be divided into subparagraphs as needed to describe the interface characteristics of one or both of the interfacing entities. If a given interfacing entity is not covered by this SDD (for example, an external system) but its interface characteristics need to be mentioned to describe interfacing entities that are, these characteristics shall be stated as assumptions or as "When [the entity not covered] does this, [the entity that is covered] will ...." This

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

paragraph may reference other documents (such as data dictionaries, standards for protocols, and standards for user interfaces) in place of stating the information here. The design description shall include the following, as applicable, presented in any order suited to the information to be provided, and shall note any differences in these characteristics from the point of view of the interfacing entities (such as different expectations about the size, frequency, or other characteristics of data elements):

- a. Priority assigned to the interface by the interfacing entity(ies)
- b. Type of interface (such as real-time data transfer, storage-and-retrieval of data, etc.) to be implemented
- c. Characteristics of individual data elements that the interfacing entity(ies) will provide, store, send, access, receive, etc., such as:
  - 1) Names/identifiers
    - a) Project-unique identifier
    - b) Non-technical (natural-language) name
    - c) DoD standard data element name
    - d) Technical name (e.g., variable or field name in code or database)
    - e) Abbreviation or synonymous names
  - 2) Data type (alphanumeric, integer, etc.)
  - 3) Size and format (such as length and punctuation of a character string)
  - 4) Units of measurement (such as meters, dollars, nanoseconds)
  - 5) Range or enumeration of possible values (such as 0-99)
  - 6) Accuracy (how correct) and precision (number of significant digits)
  - 7) Priority, timing, frequency, volume, sequencing, and other constraints, such as whether the data element may be updated and whether business rules apply
  - 8) Security and privacy constraints
  - 9) Sources (setting/sending entities) and recipients (using/receiving entities)
- d. Characteristics of data element assemblies (records, messages, files, arrays, displays, reports, etc.) that the interfacing entity(ies) will provide, store, send, access, receive, etc., such as:
  - 1) Names/identifiers
    - a) Project-unique identifier
    - b) Non-technical (natural language) name
    - c) Technical name (e.g., record or data structure name in code or database)
    - d) Abbreviations or synonymous names
  - 2) Data elements in the assembly and their structure (number, order, grouping)
  - 3) Medium (such as disk) and structure of data elements/assemblies on the medium
  - 4) Visual and auditory characteristics of displays and other outputs (such as colors, layouts, fonts, icons and other display elements, beeps, lights)

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- 5) Relationships among assemblies, such as sorting/access characteristics
  - 6) Priority, timing, frequency, volume, sequencing, and other constraints, such as whether the assembly may be updated and whether business rules apply
  - 7) Security and privacy constraints
  - 8) Sources (setting/sending entities) and recipients (using/receiving entities)
- e. Characteristics of communication methods that the interfacing entity(ies) will use for the interface, such as:
- 1) Project-unique identifier(s)
  - 2) Communication links/bands/frequencies/media and their characteristics
  - 3) Message formatting
  - 4) Flow control (such as sequence numbering and buffer allocation)
  - 5) Data transfer rate, whether periodic/aperiodic, and interval between transfers
  - 6) Routing, addressing, and naming conventions
  - 7) Transmission services, including priority and grade
  - 8) Safety/security/privacy considerations, such as encryption, user authentication, compartmentalization, and auditing
- f. Characteristics of protocols that the interfacing entity(ies) will use for the interface, such as:
- 1) Project-unique identifier(s)
  - 2) Priority/layer of the protocol
  - 3) Packeting, including fragmentation and reassembly, routing, and addressing
  - 4) Legality checks, error control, and recovery procedures
  - 5) Synchronization, including connection establishment, maintenance, termination
  - 6) Status, identification, and any other reporting features
- g. Other characteristics, such as physical compatibility of the interfacing entity(ies) (dimensions, tolerances, loads, voltages, plug compatibility, etc.)

5. CSCI detailed design. This section shall be divided into the following paragraphs to describe each software unit of the CSCI. If part of all of the design depends upon system states or modes, this dependency shall be indicated. If design information falls into more than one paragraph, it may be presented once and referenced from the other paragraphs. Design conventions needed to understand the design shall be presented or referenced. Interface characteristics of software units may be described here, in Section 4, or in Interface Design Descriptions (IDDs). Software units that are databases, or that are used to access or manipulate databases, may be described here or in Database Design Descriptions (DBDDs).

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

5.x (Project-unique identifier of a software unit, or designator of a group of software units). This paragraph shall identify a software unit by project-unique identifier and shall describe the unit. The description shall include the following information, as applicable. Alternatively, this paragraph may designate a group of software units and identify and describe the software units in subparagraphs. Software units that contain other software units may reference the descriptions of those units rather than repeating information.

- a. Unit design decisions, if any, such as algorithms to be used, if not previously selected
- b. Any constraints, limitations, or unusual features in the design of the software unit
- c. The programming language to be used and rationale for its use if other than the specified CSCI language
- d. If the software unit consists of or contains procedural commands (such as menu selections in a database management system (DBMS) for defining forms and reports, on-line DBMS queries for database access and manipulation, input to a graphical user interface (GUI) builder for automated code generation, commands to the operating system, or shell scripts), a list of the procedural commands and reference to user manuals or other documents that explain them
- e. If the software unit contains, receives, or outputs data, a description of its inputs, outputs, and other data elements and data element assemblies, as applicable. Paragraph 4.3.x of this DID provides a list of topics to be covered, as applicable. Data local to the software unit shall be described separately from data input to or output from the software unit. If the software unit is a database, a corresponding Database Design Description (DBDD) shall be referenced; interface characteristics may be provided here or by referencing section 4 or the corresponding Interface Design Description(s).
- f. If the software unit contains logic, the logic to be used by the software unit, including, as applicable:
  - 1) Conditions in effect within the software unit when its execution is initiated
  - 2) Conditions under which control is passed to other software units
  - 3) Response and response time to each input, including data conversion, renaming, and data transfer operations
  - 4) Sequence of operations and dynamically controlled sequencing during the software unit's operation, including:
    - a) The method for sequence control
    - b) The logic and input conditions of that method, such as timing variations, priority assignments
    - c) Data transfer in and out of memory
    - d) The sensing of discrete input signals, and timing relationships between interrupt operations within the software unit
  - 5) Exception and error handling



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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

6. Requirements traceability. This section shall contain:

- a. Traceability from each software unit identified in this SDD to the CSCI requirements allocated to it. (Alternatively, this traceability may be provided in 4.1.)
- b. Traceability from each CSCI requirement to the software units to which it is allocated.

7. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendixes. Appendixes may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).

## DATA ITEM DESCRIPTION

*Form Approved*  
OMB NO. 0704-0188

Public reporting burden for collection of this information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to Washington Headquarters Services, Directorate of Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

### 1. TITLE

**SOFTWARE TEST PLAN (STP)**

### 2. IDENTIFICATION NUMBER

**DI-IPSC-81438**

### 3. DESCRIPTION/PURPOSE

3.1 The Software Test Plan (STP) describes plans for qualification testing of Computer Software Configuration Items (CSCIs) and software systems. It describes the software test environment to be used for the testing, identifies the tests to be performed, and provides schedules for test activities.

3.2 There is usually a single STP for a project. The STP enables the acquirer to assess the adequacy of planning for CSCI and, if applicable, software system qualification testing.

### 4. APPROVAL DATE (YYMMDD)

**941205**

### 5. OFFICE OF PRIMARY RESPONSIBILITY

**EC**

### 6a. DTIC APPLICABLE

### 6b. GIDEP APPLICABLE

### 7. APPLICATION/INTERRELATIONSHIP

7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract.

7.2 This DID is used when the developer is tasked to develop and record plans for conducting CSCI qualification testing and/or system qualification testing of a software system.

7.3 The Contract Data Requirements List (CDRL) (DD 1423) should specify whether deliverable data are to be delivered on paper or electronic media; are to be in a given electronic form (such as ASCII, CALS, or compatible with a specified word processor or other support software); may be delivered in developer format rather than in the format specified herein; and may reside in a computer-aided software engineering (CASE) or other automated tool rather than in the form of a traditional document.

7.4 This DID supersedes DI-MCCR-80014A, DI-IPSC-80697, DI-MCCR-80307, DI-MCCR-80308, and DI-MCCR-80309.

### 8. APPROVAL LIMITATION

Limited Approval from 12/5/94 through 12/5/96

### 9a. APPLICABLE FORMS

### 9b. AMSC NUMBER

**N7081**

### 10. PREPARATION INSTRUCTIONS

#### 10.1 General instructions.

- a. Automated techniques. Use of automated techniques is encouraged. The term "document" in this DID means a collection of data regardless of its medium.
- b. Alternate presentation styles. Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles.

(Continued on Page 2)

### 11. DISTRIBUTION STATEMENT

**DISTRIBUTION STATEMENT A.** Approved for public release; distribution is unlimited.

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10. PREPARATION INSTRUCTIONS -- 10.1 General Instructions (continued)

- c. Title page or identifier. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the system, subsystem, or item to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; and distribution statement. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.
  - d. Table of contents. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.
  - e. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.
  - f. Response to tailoring instructions. If a paragraph is tailored out of this DID, the resulting document shall contain the corresponding paragraph number and title, followed by "This paragraph has been tailored out." For data in a database or other alternative form, this representation need occur only in the table of contents or equivalent.
  - g. Multiple paragraphs and subparagraphs. Any section, paragraph, or subparagraph in this DID may be written as multiple paragraphs or subparagraphs to enhance readability.
  - h. Standard data descriptions. If a data description required by this DID has been published in a standard data element dictionary specified in the contract, reference to an entry in that dictionary is preferred over including the description itself.
  - i. Substitution of existing documents. Commercial or other existing documents may be substituted for all or part of the document if they contain the required data.
- 10.2 Content requirements. Content requirements begin on the following page. The numbers shown designate the paragraph numbers to be used in the document. Each such number is understood to have the prefix "10.2" within this DID. For example, the paragraph numbered 1.1 is understood to be paragraph 10.2.1.1 within this DID.

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain a full identification of the system and the software to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2 System overview. This paragraph shall briefly state the purpose of the system and the software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 Document overview. This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

1.4 Relationship to other plans. This paragraph shall describe the relationship, if any, of the STP to related project management plans.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this plan. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Software test environment. This section shall be divided into the following paragraphs to describe the software test environment at each intended test site. Reference may be made to the Software Development Plan (SDP) for resources that are described there.

3.x (Name of test site(s)). This paragraph shall identify one or more test sites to be used for the testing, and shall be divided into the following subparagraphs to describe the software test environment at the site(s). If all tests will be conducted at a single site, this paragraph and its subparagraphs shall be presented only once. If multiple test sites use the same or similar software test environments, they may be discussed together. Duplicative information among test site descriptions may be reduced by referencing earlier descriptions.

3.x.1 Software items. This paragraph shall identify by name, number, and version, as applicable, the software items (e.g., operating systems, compilers, communications software, related applications software, databases, input files, code auditors, dynamic path analyzers, test drivers, preprocessors, test data generators, test control software, other special test software, post-processors) necessary to perform the planned testing activities at the test site(s). This paragraph shall describe the purpose of each item, describe its media (tape, disk, etc.), identify those that are expected to be supplied by the site, and identify any classified processing or other security or privacy issues associated with the software items.

3.x.2 Hardware and firmware items. This paragraph shall identify by name, number, and version, as applicable, the computer hardware, interfacing equipment, communications equipment, test data reduction equipment, apparatus such as extra peripherals (tape drives, printers, plotters), test message generators, test timing devices, test event records, etc., and firmware items that will be used in the software test environment at the test site(s). This paragraph shall describe the purpose of each item, state the period of usage and the number

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DI-IPSC-81438

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

of each item needed, identify those that are expected to be supplied by the site, and identify any classified processing or other security or privacy issues associated with the items.

3.x.3 Other materials. This paragraph shall identify and describe any other materials needed for the testing at the test site(s). These materials may include manuals, software listings, media containing the software to be tested, media containing data to be used in the tests, sample listings of outputs, and other forms or instructions. This paragraph shall identify those items that are to be delivered to the site and those that are expected to be supplied by the site. The description shall include the type, layout, and quantity of the materials, as applicable. This paragraph shall identify any classified processing or other security or privacy issues associated with the items.

3.x.4 Proprietary nature, acquirer's rights, and licensing. This paragraph shall identify the proprietary nature, acquirer's rights, and licensing issues associated with each element of the software test environment.

3.x.5 Installation, testing, and control. This paragraph shall identify the developer's plans for performing each of the following, possibly in conjunction with personnel at the test site(s):

- a. Acquiring or developing each element of the software test environment
- b. Installing and testing each item of the software test environment prior to its use
- c. Controlling and maintaining each item of the software test environment

3.x.6 Participating organizations. This paragraph shall identify the organizations that will participate in the testing at the test sites(s) and the roles and responsibilities of each.

3.x.7 Personnel. This paragraph shall identify the number, type, and skill level of personnel needed during the test period at the test site(s), the dates and times they will be needed, and any special needs, such as multishift operation and retention of key skills to ensure continuity and consistency in extensive test programs.

3.x.8 Orientation plan. This paragraph shall describe any orientation and training to be given before and during the testing. This information shall be related to the personnel needs given in 3.x.7. This training may include user instruction, operator instruction, maintenance and control group instruction, and orientation briefings to staff personnel. If extensive training is anticipated, a separate plan may be developed and referenced here.

3.x.9 Tests to be performed. This paragraph shall identify, by referencing section 4, the tests to be performed at the test site(s).

4. Test identification. This section shall be divided into the following paragraphs to identify and describe each test to which this STP applies.

4.1 General information. This paragraph shall be divided into subparagraphs to present general information applicable to the overall testing to be performed.

4.1.1 Test levels. This paragraph shall describe the levels at which testing will be performed, for example, CSCI level or system level.

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

4.1.2 Test classes. This paragraph shall describe the types or classes of tests that will be performed (for example, timing tests, erroneous input tests, maximum capacity tests).

4.1.3 General test conditions. This paragraph shall describe conditions that apply to all of the tests or to a group of tests. For example: "Each test shall include nominal, maximum, and minimum values;" "each test of type x shall use live data;" "execution size and time shall be measured for each CSCI." Included shall be a statement of the extent of testing to be performed and rationale for the extent selected. The extent of testing shall be expressed as a percentage of some well defined total quantity, such as the number of samples of discrete operating conditions or values, or other sampling approach. Also included shall be the approach to be followed for retesting/regression testing.

4.1.4 Test progression. In cases of progressive or cumulative tests, this paragraph shall explain the planned sequence or progression of tests.

4.1.5 Data recording, reduction, and analysis. This paragraph shall identify and describe the data recording, reduction, and analysis procedures to be used during and after the tests identified in this STP. These procedures shall include, as applicable, manual, automatic, and semi-automatic techniques for recording test results, manipulating the raw results into a form suitable for evaluation, and retaining the results of data reduction and analysis.

4.2 Planned tests. This paragraph shall be divided into the following subparagraphs to describe the total scope of the planned testing.

4.2.x (Item(s) to be tested). This paragraph shall identify a CSCI, subsystem, system, or other entity by name and project-unique identifier, and shall be divided into the following subparagraphs to describe the testing planned for the item(s). (Note: the "tests" in this plan are collections of test cases. There is no intent to describe each test case in this document.)

4.2.x.y (Project-unique identifier of a test). This paragraph shall identify a test by project-unique identifier and shall provide the information specified below for the test. Reference may be made as needed to the general information in 4.1.

- a. Test objective
- b. Test level
- c. Test type or class
- d. Qualification method(s) as specified in the requirements specification
- e. Identifier of the CSCI requirements and, if applicable, software system requirements addressed by this test. (Alternatively, this information may be provided in Section 6.)
- f. Special requirements (for example, 48 hours of continuous facility time, weapon simulation, extent of test, use of a special input or database)
- g. Type of data to be recorded
- h. Type of data recording/reduction/analysis to be employed

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- i. Assumptions and constraints, such as anticipated limitations on the test due to system or test conditions--timing, interfaces, equipment, personnel, database, etc.
- j. Safety, security, and privacy considerations associated with the test

5. Test schedules. This section shall contain or reference the schedules for conducting the tests identified in this plan. It shall include:

- a. A listing or chart depicting the sites at which the testing will be scheduled and the time frames during which the testing will be conducted
- b. A schedule for each test site depicting the activities and events listed below, as applicable, in chronological order with supporting narrative as necessary:
  - 1) On-site test period and periods assigned to major portions of the testing
  - 2) Pretest on-site period needed for setting up the software test environment and other equipment, system debugging, orientation, and familiarization
  - 3) Collection of database/data file values, input values, and other operational data needed for the testing
  - 4) Conducting the tests, including planned retesting
  - 5) Preparation, review, and approval of the Software Test Report (STR)

6. Requirements traceability. This paragraph shall contain:

- a. Traceability from each test identified in this plan to the CSCI requirements and, if applicable, software system requirements it addresses. (Alternatively, this traceability may be provided in 4.2.x.y and referenced from this paragraph.)
- b. Traceability from each CSCI requirement and, if applicable, each software system requirement covered by this test plan to the test(s) that address it. The traceability shall cover the CSCI requirements in all applicable Software Requirements Specifications (SRSs) and associated Interface Requirements Specifications (IRSs), and, for software systems, the system requirements in all applicable System/Subsystem Specifications (SSSs) and associated system-level IRSs.

7. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendixes. Appendixes may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).

A009

DATA ITEM DESCRIPTION		Form Approved OMB NO. 0704-0188	
Public reporting burden for collection of this information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.			
1. TITLE <b>SOFTWARE TEST DESCRIPTION (STD)</b>		2. IDENTIFICATION NUMBER <b>DI-IPSC-81439</b>	
3. DESCRIPTION/PURPOSE  3.1 The Software Test Description (STD) describes the test preparations, test cases, and test procedures to be used to perform qualification testing of a Computer Software Configuration Item (CSCI) or a software system or subsystem.  3.2 The STD enables the acquirer to assess the adequacy of the qualification testing to be performed.			
4. APPROVAL DATE (YYMMDD) 941205	5. OFFICE OF PRIMARY RESPONSIBILITY EC	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE
7. APPLICATION/INTERRELATIONSHIP  7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract.  7.2 This DID is used when the developer is tasked to define and record the test preparations, test cases, and test procedures to be used for CSCI qualification testing or for system qualification testing of a software system.  7.3 The Contract Data Requirements List (CDRL) (DD 1423) should specify whether deliverable data are to be delivered on paper or electronic media; are to be in a given electronic form (such as ASCII, CALS, or compatible with a specified word processor or other support software); may be delivered in developer format rather than in the format specified herein; and may reside in a computer-aided software engineering (CASE) or other automated tool rather than in the form of a traditional document.  7.4 This DID supersedes DI-MCCR-80015A and DI-MCCR-80310.			
8. APPROVAL LIMITATION Limited Approval from 12/5/94 through 12/5/96	9a. APPLICABLE FORMS	9b. AMSC NUMBER N7082	
10. PREPARATION INSTRUCTIONS  10.1 <u>General instructions.</u>  a. <u>Automated techniques.</u> Use of automated techniques is encouraged. The term "document" in this DID means a collection of data regardless of its medium.  b. <u>Alternate presentation styles.</u> Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles.  (Continued on Page 2)			
11. DISTRIBUTION STATEMENT DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.			



Software Test Description (STD)  
DI-IPSC-81439

10. PREPARATION INSTRUCTIONS -- 10.1 General Instructions (continued)

- c. Title page or identifier. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the system, subsystem, or item to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; and distribution statement. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.
- d. Table of contents. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.
- e. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.
- f. Response to tailoring instructions. If a paragraph is tailored out of this DID, the resulting document shall contain the corresponding paragraph number and title, followed by "This paragraph has been tailored out." For data in a database or other alternative form, this representation need occur only in the table of contents or equivalent.
- g. Multiple paragraphs and subparagraphs. Any section, paragraph, or subparagraph in this DID may be written as multiple paragraphs or subparagraphs to enhance readability.
- h. Standard data descriptions. If a data description required by this DID has been published in a standard data element dictionary specified in the contract, reference to an entry in that dictionary is preferred over including the description itself.
- i. Substitution of existing documents. Commercial or other existing documents may be substituted for all or part of the document if they contain the required data.

10.2 Content requirements. Content requirements begin on the following page. The numbers shown designate the paragraph numbers to be used in the document. Each such number is understood to have the prefix "10.2" within this DID. For example, the paragraph numbered 1.1 is understood to be paragraph 10.2.1.1 within this DID.

Software Test Description (STD)  
DI-IPSC-81439

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain a full identification of the system and the software to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2 System overview. This paragraph shall briefly state the purpose of the system and the software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 Document overview. This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this document. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Test preparations. This section shall be divided into the following paragraphs. Safety precautions, marked by WARNING or CAUTION, and security and privacy considerations shall be included as applicable.

3.x (Project-unique identifier of a test). This paragraph shall identify a test by project-unique identifier, shall provide a brief description, and shall be divided into the following subparagraphs. When the information required duplicates information previously specified for another test, that information may be referenced rather than repeated.

3.x.1 Hardware preparation. This paragraph shall describe the procedures necessary to prepare the hardware for the test. Reference may be made to published operating manuals for these procedures. The following shall be provided, as applicable:

- a. The specific hardware to be used, identified by name and, if applicable, number
- b. Any switch settings and cabling necessary to connect the hardware
- c. One or more diagrams to show hardware, interconnecting control, and data paths
- d. Step-by-step instructions for placing the hardware in a state of readiness

3.x.2 Software preparation. This paragraph shall describe the procedures necessary to prepare the item(s) under test and any related software, including data, for the test. Reference may be made to published software manuals for these procedures. The following information shall be provided, as applicable:

- a. The specific software to be used in the test
- b. The storage medium of the item(s) under test (e.g., magnetic tape, diskette)
- c. The storage medium of any related software (e.g., simulators, test drivers, databases)

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- d. Instructions for loading the software, including required sequence
- e. Instructions for software initialization common to more than one test case

3.x.3 Other pre-test preparations. This paragraph shall describe any other pre-test personnel actions, preparations, or procedures necessary to perform the test.

4. Test descriptions. This section shall be divided into the following paragraphs. Safety precautions, marked by WARNING or CAUTION, and security and privacy considerations shall be included as applicable.

4.x (Project-unique identifier of a test). This paragraph shall identify a test by project-unique identifier and shall be divided into the following subparagraphs. When the required information duplicates information previously provided, that information may be referenced rather than repeated.

4.x.y (Project-unique identifier of a test case). This paragraph shall identify a test case by project-unique identifier, state its purpose, and provide a brief description. The following subparagraphs shall provide a detailed description of the test case.

4.x.y.1 Requirements addressed. This paragraph shall identify the CSCI or system requirements addressed by the test case. (Alternatively, this information may be provided in 5.a.)

4.x.y.2 Prerequisite conditions. This paragraph shall identify any prerequisite conditions that must be established prior to performing the test case. The following considerations shall be discussed, as applicable:

- a. Hardware and software configuration
- b. Flags, initial breakpoints, pointers, control parameters, or initial data to be set/reset prior to test commencement
- c. Preset hardware conditions or electrical states necessary to run the test case
- d. Initial conditions to be used in making timing measurements
- e. Conditioning of the simulated environment
- f. Other special conditions peculiar to the test case

4.x.y.3 Test inputs. This paragraph shall describe the test inputs necessary for the test case. The following shall be provided, as applicable:

- a. Name, purpose, and description (e.g., range of values, accuracy) of each test input
- b. Source of the test input and the method to be used for selecting the test input
- c. Whether the test input is real or simulated
- d. Time or event sequence of test input
- e. The manner in which the input data will be controlled to:

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- 1) Test the item(s) with a minimum/reasonable number of data types and values
- 2) Exercise the item(s) with a range of valid data types and values that test for overload, saturation, and other "worst case" effects
- 3) Exercise the item(s) with invalid data types and values to test for appropriate handling of irregular inputs
- 4) Permit retesting, if necessary

4.x.y.4 Expected test results. This paragraph shall identify all expected test results for the test case. Both intermediate and final test results shall be provided, as applicable.

4.x.y.5 Criteria for evaluating results. This paragraph shall identify the criteria to be used for evaluating the intermediate and final results of the test case. For each test result, the following information shall be provided, as applicable:

- a. The range or accuracy over which an output can vary and still be acceptable
- b. Minimum number of combinations or alternatives of input and output conditions that constitute an acceptable test result
- c. Maximum/minimum allowable test duration, in terms of time or number of events
- d. Maximum number of interrupts, halts, or other system breaks that may occur
- e. Allowable severity of processing errors
- f. Conditions under which the result is inconclusive and re-testing is to be performed
- g. Conditions under which the outputs are to be interpreted as indicating irregularities in input test data, in the test database/data files, or in test procedures
- h. Allowable indications of the control, status, and results of the test and the readiness for the next test case (may be output of auxiliary test software)
- i. Additional criteria not mentioned above.

4.x.y.6 Test procedure. This paragraph shall define the test procedure for the test case. The test procedure shall be defined as a series of individually numbered steps listed sequentially in the order in which the steps are to be performed. For convenience in document maintenance, the test procedures may be included as an appendix and referenced in this paragraph. The appropriate level of detail in each test procedure depends on the type of software being tested. For some software, each keystroke may be a separate test procedure step; for most software, each step may include a logically related series of keystrokes or other actions. The appropriate level of detail is the level at which it is useful to specify expected results and compare them to actual results. The following shall be provided for each test procedure, as applicable:

- a. Test operator actions and equipment operation required for each step, including commands, as applicable, to:

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- 1) Initiate the test case and apply test inputs
  - 2) Inspect test conditions
  - 3) Perform interim evaluations of test results
  - 4) Record data
  - 5) Halt or interrupt the test case
  - 6) Request data dumps or other aids, if needed
  - 7) Modify the database/data files
  - 8) Repeat the test case if unsuccessful
  - 9) Apply alternate modes as required by the test case
  - 10) Terminate the test case
- b. Expected result and evaluation criteria for each step
- c. If the test case addresses multiple requirements, identification of which test procedure step(s) address which requirements. (Alternatively, this information may be provided in 5.)
- d. Actions to follow in the event of a program stop or indicated error, such as:
- 1) Recording of critical data from indicators for reference purposes
  - 2) Halting or pausing time-sensitive test-support software and test apparatus
  - 3) Collection of system and operator records of test results
- e. Procedures to be used to reduce and analyze test results to accomplish the following, as applicable:
- 1) Detect whether an output has been produced
  - 2) Identify media and location of data produced by the test case
  - 3) Evaluate output as a basis for continuation of test sequence
  - 4) Evaluate test output against required output

4.x.y.7 Assumptions and constraints. This paragraph shall identify any assumptions made and constraints or limitations imposed in the description of the test case due to system or test conditions, such as limitations on timing, interfaces, equipment, personnel, and database/data files. If waivers or exceptions to specified limits and parameters are approved, they shall be identified and this paragraph shall address their effects and impacts upon the test case.

5. Requirements traceability. This paragraph shall contain:

- a. Traceability from each test case in this STD to the system or CSCI requirements it addresses. If a test case addresses multiple requirements, traceability from each set of test procedure steps to the requirement(s) addressed. (Alternatively, this traceability may be provided in 4.x.y.1.)

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- b. Traceability from each system or CSCI requirement covered by this STD to the test case(s) that address it. For CSCI testing, traceability from each CSCI requirement in the CSCI's Software Requirements Specification (SRS) and associated Interface Requirements Specifications (IRSs). For system testing, traceability from each system requirement in the system's System/Subsystem Specification (SSS) and associated IRSs. If a test case addresses multiple requirements, the traceability shall indicate the particular test procedure steps that address each requirement.

6. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendixes. Appendixes may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).

DI-IPSC-81440

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<b>DATA ITEM DESCRIPTION</b>		<i>Form Approved</i> <b>OMB NO. 0704-0188</b>	
Public reporting burden for collection of the information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project 10704-0188, Washington, DC 20503.			
<b>1. TITLE</b>  <b>SOFTWARE TEST REPORT (STR)</b>		<b>2. IDENTIFICATION NUMBER</b>  <b>DI-IPSC-81440</b>	
<b>3. DESCRIPTION/PURPOSE</b>  3.1 The Software Test Report (STR) is a record of the qualification testing performed on a Computer Software Configuration Item (CSCI), a software system or subsystem, or other software-related item.  3.2 The STR enables the acquirer to assess the testing and its results.			
<b>4. APPROVAL DATE</b> (YYMMDD) 941205	<b>5. OFFICE OF PRIMARY RESPONSIBILITY</b> EC	<b>6a. DTIC APPLICABLE</b>	<b>6b. GIDEP APPLICABLE</b>
<b>7. APPLICATION/INTERRELATIONSHIP</b>  7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract.  7.2 This DID is used when the developer is tasked to analyze and record the results of CSCI qualification testing, system qualification testing of a software system, or other testing identified in the contract.  7.3 The Contract Data Requirements List (CDRL) (DD 1423) should specify whether deliverable data are to be delivered on paper or electronic media; are to be in a given electronic form (such as ASCII, CALS, or compatible with a specified word processor or other support software); may be delivered in developer format rather than in the format specified herein; and may reside in a computer-aided software engineering (CASE) or other automated tool rather than in the form of a traditional document.  7.4 This DID supersedes DI-MCCR-80017A, DI-IPSC-80698, and DI-MCCR-80311.			
<b>8. APPROVAL LIMITATION</b> Limited Approval from 12/5/94 through 12/5/96		<b>9a. APPLICABLE FORMS</b>	<b>9b. AMSC NUMBER</b> N7083
<b>10. PREPARATION INSTRUCTIONS</b>  10.1 <u>General instructions.</u>  a. <u>Automated techniques.</u> Use of automated techniques is encouraged. The term "document" in this DID means a collection of data regardless of its medium.  b. <u>Alternate presentation styles.</u> Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles.  (Continued on Page 2)			
<b>11. DISTRIBUTION STATEMENT</b> <b>DISTRIBUTION STATEMENT A.</b> Approved for public release; distribution is unlimited.			

Software Test Report (STR)  
DI-IPSC-81440

## 10. PREPARATION INSTRUCTIONS -- 10.1 General Instructions (continued)

- c. Title page or identifier. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the system, subsystem, or item to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; and distribution statement. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.
- d. Table of contents. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.
- e. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.
- f. Response to tailoring instructions. If a paragraph is tailored out of this DID, the resulting document shall contain the corresponding paragraph number and title, followed by "This paragraph has been tailored out." For data in a database or other alternative form, this representation need occur only in the table of contents or equivalent.
- g. Multiple paragraphs and subparagraphs. Any section, paragraph, or subparagraph in this DID may be written as multiple paragraphs or subparagraphs to enhance readability.
- h. Standard data descriptions. If a data description required by this DID has been published in a standard data element dictionary specified in the contract, reference to an entry in that dictionary is preferred over including the description itself.
- i. Substitution of existing documents. Commercial or other existing documents may be substituted for all or part of the document if they contain the required data.

10.2 Content requirements. Content requirements begin on the following page. The numbers shown designate the paragraph numbers to be used in the document. Each such number is understood to have the prefix "10.2" within this DID. For example, the paragraph numbered 1.1 is understood to be paragraph 10.2.1.1 within this DID.



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Software Test Report (STR)  
DI-IPSC-81440

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain a full identification of the system and the software to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2 System overview. This paragraph shall briefly state the purpose of the system and the software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 Document overview. This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this report. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Overview of test results. This section shall be divided into the following paragraphs to provide an overview of test results.

3.1 Overall assessment of the software tested. This paragraph shall:

- a. Provide an overall assessment of the software as demonstrated by the test results in this report
- b. Identify any remaining deficiencies, limitations, or constraints that were detected by the testing performed. Problem/change reports may be used to provide deficiency information.
- c. For each remaining deficiency, limitation, or constraint, describe:
  - 1) Its impact on software and system performance, including identification of requirements not met
  - 2) The impact on software and system design to correct it
  - 3) A recommended solution/approach for correcting it

3.2 Impact of test environment. This paragraph shall provide an assessment of the manner in which the test environment may be different from the operational environment and the effect of this difference on the test results.

3.3 Recommended improvements. This paragraph shall provide any recommended improvements in the design, operation, or testing of the software tested. A discussion of each recommendation and its impact on the software may be provided. If no recommended improvements are provided, this paragraph shall state "None."

Software Test Report (STR)  
DI-IPSC-81440

## 10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

4. Detailed test results. This section shall be divided into the following paragraphs to describe the detailed results for each test. Note: The word "test" means a related collection of test cases.

4.x (Project-unique identifier of a test). This paragraph shall identify a test by project-unique identifier and shall be divided into the following subparagraphs to describe the test results.

4.x.1 Summary of test results. This paragraph shall summarize the results of the test. The summary shall include, possibly in a table, the completion status of each test case associated with the test (for example, "all results as expected," "problems encountered," "deviations required"). When the completion status is not "as expected," this paragraph shall reference the following paragraphs for details.

4.x.2 Problems encountered. This paragraph shall be divided into subparagraphs that identify each test case in which one or more problems occurred.

4.x.2.y (Project-unique identifier of a test case). This paragraph shall identify by project-unique identifier a test case in which one or more problems occurred, and shall provide:

- a. A brief description of the problem(s) that occurred
- b. Identification of the test procedure step(s) in which they occurred
- c. Reference(s) to the associated problem/change report(s) and backup data, as applicable
- d. The number of times the procedure or step was repeated in attempting to correct the problem(s) and the outcome of each attempt
- e. Back-up points or test steps where tests were resumed for retesting

4.x.3 Deviations from test cases/procedures. This paragraph shall be divided into subparagraphs that identify each test case in which deviations from test case/test procedures occurred.

4.x.3.y (Project-unique identifier of a test case). This paragraph shall identify by project-unique identifier a test case in which one or more deviations occurred, and shall provide:

- a. A description of the deviation(s) (for example, test case run in which the deviation occurred and nature of the deviation, such as substitution of required equipment, procedural steps not followed, schedule deviations). (Red-lined test procedures may be used to show the deviations)
- b. The rationale for the deviation(s)
- c. An assessment of the deviations' impact on the validity of the test case

Software Test Report (STR)  
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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

5. Test log. This section shall present, possibly in a figure or appendix, a chronological record of the test events covered by this report. This test log shall include:

- a. The date(s), time(s), and location(s) of the tests performed
- b. The hardware and software configurations used for each test including, as applicable, part/model/serial number, manufacturer, revision level, and calibration date of all hardware, and version number and name for the software components used
- c. The date and time of each test-related activity, the identity of the individual(s) who performed the activity, and the identities of witnesses, as applicable

6. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendixes. Appendixes may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).

DI-IPSC-81439

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DATA ITEM DESCRIPTION		Form Approved OMB NO. 0704-0188	
<small>Public reporting burden for collection of this information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.</small>			
1. TITLE <b>SOFTWARE TEST DESCRIPTION (STD)</b>		2. IDENTIFICATION NUMBER <b>DI-IPSC-81439</b>	
3. DESCRIPTION/PURPOSE  3.1 The Software Test Description (STD) describes the test preparations, test cases, and test procedures to be used to perform qualification testing of a Computer Software Configuration Item (CSCI) or a software system or subsystem.  3.2 The STD enables the acquirer to assess the adequacy of the qualification testing to be performed.			
4. APPROVAL DATE (YYMMDD) 941205	5. OFFICE OF PRIMARY RESPONSIBILITY EC	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE
7. APPLICATION/INTERRELATIONSHIP  7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract.  7.2 This DID is used when the developer is tasked to define and record the test preparations, test cases, and test procedures to be used for CSCI qualification testing or for system qualification testing of a software system.  7.3 The Contract Data Requirements List (CDRL) (DD 1423) should specify whether deliverable data are to be delivered on paper or electronic media; are to be in a given electronic form (such as ASCII, CALS, or compatible with a specified word processor or other support software); may be delivered in developer format rather than in the format specified herein; and may reside in a computer-aided software engineering (CASE) or other automated tool rather than in the form of a traditional document.  7.4 This DID supersedes DI-MCCR-80015A and DI-MCCR-80310.			
8. APPROVAL LIMITATION Limited Approval from 12/5/94 through 12/5/96	9a. APPLICABLE FORMS	9b. AMSC NUMBER N7082	
10. PREPARATION INSTRUCTIONS  10.1 <u>General instructions.</u>  a. <u>Automated techniques.</u> Use of automated techniques is encouraged. The term "document" in this DID means a collection of data regardless of its medium.  b. <u>Alternate presentation styles.</u> Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles.			
(Continued on Page 2)			
11. DISTRIBUTION STATEMENT DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.			

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136/123

Previous editions are obsolete

Page 1 of 2 Pages

10. PREPARATION INSTRUCTIONS -- 10.1 General Instructions (continued)

- c. Title page or identifier. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the system, subsystem, or item to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; and distribution statement. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.
- d. Table of contents. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.
- e. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.
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- i. Substitution of existing documents. Commercial or other existing documents may be substituted for all or part of the document if they contain the required data.

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10. PREPARATION INSTRUCTIONS – 10.2 Content Requirements (continued)

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain a full identification of the system and the software to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2 System overview. This paragraph shall briefly state the purpose of the system and the software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

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2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this document. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Test preparations. This section shall be divided into the following paragraphs. Safety precautions, marked by WARNING or CAUTION, and security and privacy considerations shall be included as applicable.

3.x (Project-unique identifier of a test). This paragraph shall identify a test by project-unique identifier, shall provide a brief description, and shall be divided into the following subparagraphs. When the information required duplicates information previously specified for another test, that information may be referenced rather than repeated.

3.x.1 Hardware preparation. This paragraph shall describe the procedures necessary to prepare the hardware for the test. Reference may be made to published operating manuals for these procedures. The following shall be provided, as applicable:

- a. The specific hardware to be used, identified by name and, if applicable, number
- b. Any switch settings and cabling necessary to connect the hardware
- c. One or more diagrams to show hardware, interconnecting control, and data paths
- d. Step-by-step instructions for placing the hardware in a state of readiness

3.x.2 Software preparation. This paragraph shall describe the procedures necessary to prepare the item(s) under test and any related software, including data, for the test. Reference may be made to published software manuals for these procedures. The following information shall be provided, as applicable:

- a. The specific software to be used in the test
- b. The storage medium of the item(s) under test (e.g., magnetic tape, diskette)
- c. The storage medium of any related software (e.g., simulators, test drivers, databases)

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- d. Instructions for loading the software, including required sequence
- e. Instructions for software initialization common to more than one test case

3.x.3 Other pre-test preparations. This paragraph shall describe any other pre-test personnel actions, preparations, or procedures necessary to perform the test.

4. Test descriptions. This section shall be divided into the following paragraphs. Safety precautions, marked by WARNING or CAUTION, and security and privacy considerations shall be included as applicable.

4.x (Project-unique identifier of a test). This paragraph shall identify a test by project-unique identifier and shall be divided into the following subparagraphs. When the required information duplicates information previously provided, that information may be referenced rather than repeated.

4.x.y (Project-unique identifier of a test case). This paragraph shall identify a test case by project-unique identifier, state its purpose, and provide a brief description. The following subparagraphs shall provide a detailed description of the test case.

4.x.y.1 Requirements addressed. This paragraph shall identify the CSCI or system requirements addressed by the test case. (Alternatively, this information may be provided in 5.a.)

4.x.y.2 Prerequisite conditions. This paragraph shall identify any prerequisite conditions that must be established prior to performing the test case. The following considerations shall be discussed, as applicable:

- a. Hardware and software configuration
- b. Flags, initial breakpoints, pointers, control parameters, or initial data to be set/reset prior to test commencement
- c. Preset hardware conditions or electrical states necessary to run the test case
- d. Initial conditions to be used in making timing measurements
- e. Conditioning of the simulated environment
- f. Other special conditions peculiar to the test case

4.x.y.3 Test inputs. This paragraph shall describe the test inputs necessary for the test case. The following shall be provided, as applicable:

- a. Name, purpose, and description (e.g., range of values, accuracy) of each test input
- b. Source of the test input and the method to be used for selecting the test input
- c. Whether the test input is real or simulated
- d. Time or event sequence of test input
- e. The manner in which the input data will be controlled to:

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- 1) Test the item(s) with a minimum/reasonable number of data types and values
- 2) Exercise the item(s) with a range of valid data types and values that test for overload, saturation, and other "worst case" effects
- 3) Exercise the item(s) with invalid data types and values to test for appropriate handling of irregular inputs
- 4) Permit retesting, if necessary

4.x.y.4 Expected test results. This paragraph shall identify all expected test results for the test case. Both intermediate and final test results shall be provided, as applicable.

4.x.y.5 Criteria for evaluating results. This paragraph shall identify the criteria to be used for evaluating the intermediate and final results of the test case. For each test result, the following information shall be provided, as applicable:

- a. The range or accuracy over which an output can vary and still be acceptable
- b. Minimum number of combinations or alternatives of input and output conditions that constitute an acceptable test result
- c. Maximum/minimum allowable test duration, in terms of time or number of events
- d. Maximum number of interrupts, halts, or other system breaks that may occur
- e. Allowable severity of processing errors
- f. Conditions under which the result is inconclusive and re-testing is to be performed
- g. Conditions under which the outputs are to be interpreted as indicating irregularities in input test data, in the test database/data files, or in test procedures
- h. Allowable indications of the control, status, and results of the test and the readiness for the next test case (may be output of auxiliary test software)
- i. Additional criteria not mentioned above.

4.x.y.6 Test procedure. This paragraph shall define the test procedure for the test case. The test procedure shall be defined as a series of individually numbered steps listed sequentially in the order in which the steps are to be performed. For convenience in document maintenance, the test procedures may be included as an appendix and referenced in this paragraph. The appropriate level of detail in each test procedure depends on the type of software being tested. For some software, each keystroke may be a separate test procedure step; for most software, each step may include a logically related series of keystrokes or other actions. The appropriate level of detail is the level at which it is useful to specify expected results and compare them to actual results. The following shall be provided for each test procedure, as applicable:

- a. Test operator actions and equipment operation required for each step, including commands, as applicable, to:



10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- 1) Initiate the test case and apply test inputs
- 2) Inspect test conditions
- 3) Perform interim evaluations of test results
- 4) Record data
- 5) Halt or interrupt the test case
- 6) Request data dumps or other aids, if needed
- 7) Modify the database/data files
- 8) Repeat the test case if unsuccessful
- 9) Apply alternate modes as required by the test case
- 10) Terminate the test case

- b. Expected result and evaluation criteria for each step
- c. If the test case addresses multiple requirements, identification of which test procedure step(s) address which requirements. (Alternatively, this information may be provided in 5.)
- d. Actions to follow in the event of a program stop or indicated error, such as:
  - 1) Recording of critical data from indicators for reference purposes
  - 2) Halting or pausing time-sensitive test-support software and test apparatus
  - 3) Collection of system and operator records of test results
- e. Procedures to be used to reduce and analyze test results to accomplish the following, as applicable:
  - 1) Detect whether an output has been produced
  - 2) Identify media and location of data produced by the test case
  - 3) Evaluate output as a basis for continuation of test sequence
  - 4) Evaluate test output against required output

**4.x.y.7 Assumptions and constraints.** This paragraph shall identify any assumptions made and constraints or limitations imposed in the description of the test case due to system or test conditions, such as limitations on timing, interfaces, equipment, personnel, and database/data files. If waivers or exceptions to specified limits and parameters are approved, they shall be identified and this paragraph shall address their effects and impacts upon the test case.

**5. Requirements traceability.** This paragraph shall contain:

- a. Traceability from each test case in this STD to the system or CSCI requirements it addresses. If a test case addresses multiple requirements, traceability from each set of test procedure steps to the requirement(s) addressed. (Alternatively, this traceability may be provided in 4.x.y.1.)

10. PREPARATION INSTRUCTIONS – 10.2 Content Requirements (continued)

- b. Traceability from each system or CSCI requirement covered by this STD to the test case(s) that address it. For CSCI testing, traceability from each CSCI requirement in the CSCI's Software Requirements Specification (SRS) and associated Interface Requirements Specifications (IRSs). For system testing, traceability from each system requirement in the system's System/Subsystem Specification (SSS) and associated IRSs. If a test case addresses multiple requirements, the traceability shall indicate the particular test procedure steps that address each requirement.

6. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendixes. Appendixes may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).

A012

<b>DATA ITEM DESCRIPTION</b>		Form Approved OMB NO. 0704-0188	
Public reporting burden for collection of this information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Operations and Reports, 1216 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.			
1. TITLE <b>SOFTWARE TEST REPORT (STR)</b>		2. IDENTIFICATION NUMBER <b>DI-IPSC-81440</b>	
3. DESCRIPTION/PURPOSE  3.1 The Software Test Report (STR) is a record of the qualification testing performed on a Computer Software Configuration Item (CSCI), a software system or subsystem, or other software-related item.  3.2 The STR enables the acquirer to assess the testing and its results.			
4. APPROVAL DATE (YYMMDD) 941205	5. OFFICE OF PRIMARY RESPONSIBILITY EC	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE
7. APPLICATION/INTERRELATIONSHIP  7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract.  7.2 This DID is used when the developer is tasked to analyze and record the results of CSCI qualification testing, system qualification testing of a software system, or other testing identified in the contract.  7.3 The Contract Data Requirements List (CDRL) (DD 1423) should specify whether deliverable data are to be delivered on paper or electronic media; are to be in a given electronic form (such as ASCII, CALS, or compatible with a specified word processor or other support software); may be delivered in developer format rather than in the format specified herein; and may reside in a computer-aided software engineering (CASE) or other automated tool rather than in the form of a traditional document.  7.4 This DID supersedes DI-MCCR-80017A, DI-IPSC-80698, and DI-MCCR-80311.			
8. APPROVAL LIMITATION Limited Approval from 12/5/94 through 12/5/96	9a. APPLICABLE FORMS	9b. AMSC NUMBER N7083	
10. PREPARATION INSTRUCTIONS  10.1 <u>General instructions.</u>  a. <u>Automated techniques.</u> Use of automated techniques is encouraged. The term "document" in this DID means a collection of data regardless of its medium.  b. <u>Alternate presentation styles.</u> Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles.  (Continued on Page 2)			
11. DISTRIBUTION STATEMENT DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.			

Software Test Report (STR)  
DI-IPSC-81440

10. PREPARATION INSTRUCTIONS -- 10.1 General Instructions (continued)

- c. Title page or identifier. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the system, subsystem, or item to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; and distribution statement. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods..
- d. Table of contents. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.
- e. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.
- f. Response to tailoring instructions. If a paragraph is tailored out of this DID, the resulting document shall contain the corresponding paragraph number and title, followed by "This paragraph has been tailored out." For data in a database or other alternative form, this representation need occur only in the table of contents or equivalent.
- g. Multiple paragraphs and subparagraphs. Any section, paragraph, or subparagraph in this DID may be written as multiple paragraphs or subparagraphs to enhance readability.
- h. Standard data descriptions. If a data description required by this DID has been published in a standard data element dictionary specified in the contract, reference to an entry in that dictionary is preferred over including the description itself.
- i. Substitution of existing documents. Commercial or other existing documents may be substituted for all or part of the document if they contain the required data.

10.2 Content requirements. Content requirements begin on the following page. The numbers shown designate the paragraph numbers to be used in the document. Each such number is understood to have the prefix "10.2" within this DID. For example, the paragraph numbered 1.1 is understood to be paragraph 10.2.1.1 within this DID.

Software Test Report (STR)  
DI-IPSC-81440

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain a full identification of the system and the software to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2 System overview. This paragraph shall briefly state the purpose of the system and the software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 Document overview. This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this report. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Overview of test results. This section shall be divided into the following paragraphs to provide an overview of test results.

3.1 Overall assessment of the software tested. This paragraph shall:

- a. Provide an overall assessment of the software as demonstrated by the test results in this report
- b. Identify any remaining deficiencies, limitations, or constraints that were detected by the testing performed. Problem/change reports may be used to provide deficiency information.
- c. For each remaining deficiency, limitation, or constraint, describe:
  - 1) Its impact on software and system performance, including identification of requirements not met
  - 2) The impact on software and system design to correct it
  - 3) A recommended solution/approach for correcting it

3.2 Impact of test environment. This paragraph shall provide an assessment of the manner in which the test environment may be different from the operational environment and the effect of this difference on the test results.

3.3 Recommended improvements. This paragraph shall provide any recommended improvements in the design, operation, or testing of the software tested. A discussion of each recommendation and its impact on the software may be provided. If no recommended improvements are provided, this paragraph shall state "None."

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

4. Detailed test results. This section shall be divided into the following paragraphs to describe the detailed results for each test. Note: The word "test" means a related collection of test cases.

4.x (Project-unique identifier of a test). This paragraph shall identify a test by project-unique identifier and shall be divided into the following subparagraphs to describe the test results.

4.x.1 Summary of test results. This paragraph shall summarize the results of the test. The summary shall include, possibly in a table, the completion status of each test case associated with the test (for example, "all results as expected," "problems encountered," "deviations required"). When the completion status is not "as expected," this paragraph shall reference the following paragraphs for details.

4.x.2 Problems encountered. This paragraph shall be divided into subparagraphs that identify each test case in which one or more problems occurred.

4.x.2.y (Project-unique identifier of a test case). This paragraph shall identify by project-unique identifier a test case in which one or more problems occurred, and shall provide:

- a. A brief description of the problem(s) that occurred
- b. Identification of the test procedure step(s) in which they occurred
- c. Reference(s) to the associated problem/change report(s) and backup data, as applicable
- d. The number of times the procedure or step was repeated in attempting to correct the problem(s) and the outcome of each attempt
- e. Back-up points or test steps where tests were resumed for retesting

4.x.3 Deviations from test cases/procedures. This paragraph shall be divided into subparagraphs that identify each test case in which deviations from test case/test procedures occurred.

4.x.3.y (Project-unique identifier of a test case). This paragraph shall identify by project-unique identifier a test case in which one or more deviations occurred, and shall provide:

- a. A description of the deviation(s) (for example, test case run in which the deviation occurred and nature of the deviation, such as substitution of required equipment, procedural steps not followed, schedule deviations). (Red-lined test procedures may be used to show the deviations)
- b. The rationale for the deviation(s)
- c. An assessment of the deviations' impact on the validity of the test case.

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DI-IPSC-81440

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

5. Test log. This section shall present, possibly in a figure or appendix, a chronological record of the test events covered by this report. This test log shall include:

- a. The date(s), time(s), and location(s) of the tests performed
- b. The hardware and software configurations used for each test including, as applicable, part/model/serial number, manufacturer, revision level, and calibration date of all hardware, and version number and name for the software components used
- c. The date and time of each test-related activity, the identity of the individual(s) who performed the activity, and the identities of witnesses, as applicable

6. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendixes. Appendixes may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).

A013

<b>DATA ITEM DESCRIPTION</b>			Form Approved OMB NO. 0704-0188	
Public reporting burden for collection of the information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate of Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. TITLE <b>SOFTWARE TRANSITION PLAN (STrP)</b>			2. IDENTIFICATION NUMBER <b>DI-IPSC-81429</b>	
3. DESCRIPTION/PURPOSE  3.1 The Software Transition Plan (STrP) identifies the hardware, software, and other resources needed for life cycle support of deliverable software and describes the developer's plans for transitioning deliverable items to the support agency.  3.2 The STrP is developed if the software support concept calls for transition of responsibility from the developer to a separate support agency. The STrP may also be used by the acquirer for updating the Computer Resources Life Cycle Management Plan.				
4. APPROVAL DATE (YYMMDD) <b>941205</b>	5. OFFICE OF PRIMARY RESPONSIBILITY <b>EC</b>	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE	
7. APPLICATION/INTERRELATIONSHIP  7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract.  7.2 This DID is used when the developer is tasked to develop and record plans for transitioning deliverable items to the support agency.  7.3 The Contract Data Requirements List (CDRL) (DD 1423) should specify whether deliverable data are to be delivered on paper or electronic media; are to be in a given electronic form (such as ASCII, CALS, or compatible with a specified word processor or other support software); may be delivered in developer format rather than in the format specified herein; and may reside in a computer-aided software engineering (CASE) or other automated tool rather than in the form of a traditional document.  7.4 This DID supersedes DI-MCCR-80024A.				
8. APPROVAL LIMITATION Limited Approval from 12/5/94 through 12/5/96		9a. APPLICABLE FORMS	9b. AMSC NUMBER <b>N7072</b>	
10. PREPARATION INSTRUCTIONS  10.1 <u>General instructions.</u>  a. <u>Automated techniques.</u> Use of automated techniques is encouraged. The term "document" in this DID means a collection of data regardless of its medium.  b. <u>Alternate presentation styles.</u> Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles.  (Continued on Page 2)				
11. DISTRIBUTION STATEMENT <b>DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.</b>				



Software Transition Plan (STrP)  
DI-IPSC-81429

10. PREPARATION INSTRUCTIONS -- 10.1 General Instructions (continued)

- c. Title page or identifier. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the system, subsystem, or item to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; and distribution statement. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.
- d. Table of contents. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.
- e. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.
- f. Response to tailoring instructions. \* If a paragraph is tailored out of this DID, the resulting document shall contain the corresponding paragraph number and title, followed by "This paragraph has been tailored out." For data in a database or other alternative form, this representation need occur only in the table of contents or equivalent.
- g. Multiple paragraphs and subparagraphs. Any section, paragraph, or subparagraph in this DID may be written as multiple paragraphs or subparagraphs to enhance readability.
- h. Standard data descriptions. If a data description required by this DID has been published in a standard data element dictionary specified in the contract, reference to an entry in that dictionary is preferred over including the description itself.
- i. Substitution of existing documents. Commercial or other existing documents may be substituted for all or part of the document if they contain the required data.

10.2 Content requirements. Content requirements begin on the following page. The numbers shown designate the paragraph numbers to be used in the document. Each such number is understood to have the prefix "10.2" within this DID. For example, the paragraph numbered 1.1 is understood to be paragraph 10.2.1.1 within this DID.

Software Transition Plan (STrP)  
DI-IPSC-81429

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain a full identification of the system and the software to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2 System overview. This paragraph shall briefly state the purpose of the system and the software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 Document overview. This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

1.4 Relationship to other plans. This paragraph shall describe the relationship, if any, of the STrP to other project management plans.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this document. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Software support resources. This section shall be divided into paragraphs to identify and describe the resources needed to support the deliverable software. These resources shall include items needed to control, copy, and distribute the software and its documentation, and to specify, design, implement, document, test, evaluate, control, copy, and distribute modifications to the software.

3.1 Facilities. This paragraph shall describe the facilities needed to support the deliverable software. These facilities may include special buildings, rooms, mock-ups, building features such as raised flooring or cabling; building features to support security and privacy requirements (TEMPEST shielding, vaults, etc.), building features to support safety requirements (smoke alarms, safety glass, etc.), special power requirements, and so on. The purpose of each item shall be described. Diagrams may be included as applicable.

3.2 Hardware. This paragraph shall identify and describe the hardware and associated documentation needed to support the deliverable software. This hardware may include computers, peripheral equipment, hardware simulators, stimulators, emulators, diagnostic equipment, and non-computer equipment. The description shall include:

- a. Specific models, versions, and configurations
- b. Rationale for the selected hardware
- c. Reference to user/operator manuals or instructions for each item, as applicable
- d. Identification of each hardware item and document as acquirer-furnished, an item that will be delivered to the support agency, an item the support agency is known to have, an item the support agency must acquire, or other description of status

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- e. If items must be acquired, information about a current source of supply, including whether the item is currently available and whether it is expected to be available at the time of delivery
- f. Information about manufacturer support, licensing, and data rights, including whether the item is currently supported by the manufacturer, whether it is expected to be supported at the time of delivery, whether licenses will be assigned to the support agency, and the terms of such licenses
- g. Security and privacy considerations, limitations, or other items of interest

**3.3 Software.** This paragraph shall identify and describe the software and associated documentation needed to support the deliverable software. This software may include computer-aided software engineering (CASE) tools, data in these tools, compilers, test tools, test data, simulations, emulations, utilities, configuration management tools, databases and data files, and other software. The description shall include:

- a. Specific names, identification numbers, version numbers, release numbers, and configurations, as applicable
- b. Rationale for the selected software
- c. Reference to user/operator manuals or instructions for each item, as applicable
- d. Identification of each software item and document as acquirer-furnished, an item that will be delivered to the support agency, an item the support agency is known to have, an item the support agency must acquire, or other description of status
- e. If items must be acquired, information about a current source of supply, including whether the item is currently available and whether it is expected to be available at the time of delivery
- f. Information about vendor support, licensing, and data rights, including whether the item is currently supported by the vendor, whether it is expected to be supported at the time of delivery, whether licenses will be assigned to the support agency, and the terms of such licenses
- g. Security and privacy considerations, limitations, or other items of interest

**3.4 Other documentation.** This paragraph shall identify any other documentation needed to support the deliverable software. The list will include, for example, plans, reports, studies, specifications, design descriptions, test cases/procedures, test reports, user/operator manuals, and support manuals for the deliverable software. This paragraph shall provide:

- a. Names, identification numbers, version numbers, and release numbers, as applicable
- b. Rationale for including each document in the list
- c. Identification of each document as acquirer-furnished, an item that will be delivered to the support agency, an item the support agency is known to have, an item the support agency must acquire, or other description of status
- d. If a document must be acquired, information about where to acquire it

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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- e. Information about licensing and data rights
- f. Security and privacy considerations, limitations, or other items of interest

3.5 Personnel. This paragraph shall describe the personnel needed to support the deliverable software, including anticipated number of personnel, types and levels of skills and expertise, and security clearances. This paragraph shall cite, as applicable, actual staffing on the development project as a basis for the staffing needs cited.

3.6 Other resources. This paragraph shall identify any other resources needed to support the deliverable software. Included may be consumables such as magnetic tapes and diskettes, together with an estimate of the type and number that should be acquired.

3.7 Interrelationship of components. This paragraph shall identify the interrelationships of the components identified in the preceding paragraphs. A figure may be used to show the interrelationships.

4. Recommended procedures. This section shall be divided into paragraphs as needed to describe any procedures, including advice and lessons learned, that the developer may wish to recommend to the support agency for supporting the deliverable software and associated support environment.

5. Training. This section shall be divided into paragraphs as appropriate to describe the developer's plans for training support personnel to support of the deliverable software. This section shall include:

- a. The schedule, duration, and location for the training
- b. The delineation between classroom training and "hands-on" training
- c. Provision (either directly or by reference) for:
  - 1) Familiarization with the operational software and target computer(s)
  - 2) Familiarization with the support software and host system

6. Anticipated areas of change. This section shall describe anticipated areas of change to the deliverable software.

7. Transition planning. This section shall be divided into paragraphs as needed to describe the developer's plans for transitioning the deliverable software to the support agency. This section shall address the following:

- a. All activities to be performed to transition the deliverable software to the support agency. These activities may include planning/coordination meetings; preparation of items to be delivered to the support agency; packaging, shipment, installation, and checkout of the software support environment; packaging, shipment, installation, and checkout of the operational software; and training of support personnel.
- b. Roles and responsibilities for each activity

Software Transition Plan (STrP)  
DI-IPSC-81429

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- c. The resources needed to carry out the transition activities and the source from which each resource will be provided
- d. Schedules and milestones for conducting the transition activities. These schedules and milestones shall be compatible with the contract master schedule.
- e. Procedures for installation and checkout of deliverable items in the support environment

8. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendixes. Appendixes may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).

A014

<b>DATA ITEM DESCRIPTION</b>		Form Approved OMB NO. 0704-0188	
Public reporting burden for collection of this information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.			
<b>1. TITLE</b>  SOFTWARE PRODUCT SPECIFICATION (SPS)		<b>2. IDENTIFICATION NUMBER</b>  DI-IPSC-81441	
<b>3. DESCRIPTION/PURPOSE</b>  3.1 The Software Product Specification (SPS) contains or references the executable software, source files, and software support information, including "as built" design information and compilation, build, and modification procedures, for a Computer Software Configuration Item (CSCI).  3.2 The SPS can be used to order the executable software and/or source files for a CSCI and is the primary software support document for the CSCI. Note: Different organizations have different policies for ordering delivery of software. These policies should be determined before applying this DID.			
<b>4. APPROVAL DATE</b> (YYYYMM) 941205	<b>5. OFFICE OF PRIMARY RESPONSIBILITY</b> EC	<b>6a. DTIC APPLICABLE</b>	<b>6b. GIDEP APPLICABLE</b>
<b>7. APPLICATION/INTERRELATIONSHIP</b>  7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract.  7.2 This DID is used when the developer is tasked to prepare executable software, source files, "as built" CSCI design, and/or related support information for delivery.  7.3 The Contract Data Requirements List (CDRL) (DD 1423) should specify whether deliverable data are to be delivered on paper or electronic media; are to be in a given electronic form (such as ASCII, CALS, or compatible with a specified word processor or other support software); may be delivered in developer format rather than in the format specified herein; and may reside in a computer-aided software engineering (CASE) or other automated tool rather than in the form of a traditional document.  7.4 This DID supersedes DI-MCCR-80029A, DI-IPSC-80696, and DI-MCCR-80317.			
<b>8. APPROVAL LIMITATION</b> Limited Approval from 12/5/94 through 12/5/96		<b>9a. APPLICABLE FORMS</b>	<b>9b. AMSC NUMBER</b> N7084
<b>10. PREPARATION INSTRUCTIONS</b>  10.1 <u>General instructions.</u>  a. <u>Automated techniques.</u> Use of automated techniques is encouraged. The term "document" in this DID means a collection of data regardless of its medium.  b. <u>Alternate presentation styles.</u> Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles.			
(Continued on Page 2)			
<b>11. DISTRIBUTION STATEMENT</b> DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.			

10. PREPARATION INSTRUCTIONS -- 10.1 General Instructions (continued)

- c. Title page or identifier with signature blocks. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the system, subsystem, or item to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; distribution statement; and signature blocks for the developer representative authorized to release the document, the acquirer representative authorized to approve the document, and the dates of release/approval. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.
- d. Table of contents. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.
- e. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.
- f. Response to tailoring instructions. If a paragraph is tailored out of this DID, the resulting document shall contain the corresponding paragraph number and title, followed by "This paragraph has been tailored out." For data in a database or other alternative form, this representation need occur only in the table of contents or equivalent.
- g. Multiple paragraphs and subparagraphs. Any section, paragraph, or subparagraph in this DID may be written as multiple paragraphs or subparagraphs to enhance readability.
- h. Standard data descriptions. If a data description required by this DID has been published in a standard data element dictionary specified in the contract, reference to an entry in that dictionary is preferred over including the description itself.
- i. Substitution of existing documents. Commercial or other existing documents may be substituted for all or part of the document if they contain the required data.

10.2 Content requirements. Content requirements begin on the following page. The numbers shown designate the paragraph numbers to be used in the document. Each such number is understood to have the prefix "10.2" within this DID. For example, the paragraph numbered 1.1 is understood to be paragraph 10.2.1.1 within this DID.

Software Product Specification (SPS)  
DI-IPSC-81441

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain a full identification of the system and the software to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2 System overview. This paragraph shall briefly state the purpose of the system and the software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 Document overview. This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this specification. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Requirements. This section shall be divided into the following paragraphs to achieve delivery of the software and to establish the requirements that another body of software must meet to be considered a valid copy of the CSCI.

Note: In past versions of this DID, Section 3 required a presentation of the software design describing the "as built" software. That approach was modeled on hardware development, in which the product specification presents the final design as the requirement to which hardware items must be manufactured. For software, however, this approach does not apply. Software "manufacturing" consists of electronic duplication of the software itself, not recreation from design, and the validity of a "manufactured" copy is determined by comparison to the software itself, not to a design description. This section therefore establishes the software itself as the criterion that must be matched for a body of software to be considered a valid copy of the CSCI. The updated software design has been placed in Section 5 below, not as a requirement, but as information to be used to modify, enhance, or otherwise support the software. If any portion of this specification is placed under acquirer configuration control, it should be limited to Section 3. It is the software itself that establishes the product baseline, not a description of the software's design.

3.1 Executable software. This paragraph shall provide, by reference to enclosed or otherwise provided electronic media, the executable software for the CSCI, including any batch files, command files, data files, or other software files needed to install and operate the software on its target computer(s). In order for a body of software to be considered a valid copy of the CSCI's executable software, it must be shown to match these files exactly.

3.2 Source files. This paragraph shall provide, by reference to enclosed or otherwise provided electronic media, the source files for the CSCI, including any batch files, command files, data files, or other files needed to regenerate the executable software for the CSCI. In order for a body of software to be considered a valid copy of the CSCI's source files, it must be shown to match these files exactly.



Software Product Specification (SPS)  
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10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

3.3 Packaging requirements. This paragraph shall state the requirements, if any, for packaging and marking copies of the CSCI.

4. Qualification provisions. This paragraph shall state the method(s) to be used to demonstrate that a given body of software is a valid copy of the CSCI. For example, the method for executable files might be to establish that each executable file referenced in 3.1 has an identically-named counterpart in the software in question and that each such counterpart can be shown, via bit-for-bit comparison, check sum, or other method, to be identical to the corresponding executable file. The method for source files might be comparable, using the source files referenced in 3.2.

5. Software support information. This section shall be divided into the following paragraphs to provide information needed to support the CSCI.

5.1 "As built" software design. This paragraph shall contain, or reference an appendix or other deliverable document that contains, information describing the design of the "as built" CSCI. The information shall be the same as that required in a Software Design Description (SDD), Interface Design Description (IDD), and Database Design Description (DBDD), as applicable. If these documents or their equivalents are to be delivered for the "as built" CSCI, this paragraph shall reference them. If not, the information shall be provided in this document. Information provided in the headers, comments, and code of the source code listings may be referenced and need not be repeated in this section. If the SDD, IDD, or DBDD is included in an appendix, the paragraph numbers and page numbers need not be changed.

5.2 Compilation/build procedures. This paragraph shall describe, or reference an appendix that describes, the compilation/build process to be used to create the executable files from the source files and to prepare the executable files to be loaded into firmware or other distribution media. It shall specify the compiler(s)/assembler(s) to be used, including version numbers; other hardware and software needed, including version numbers; any settings, options, or conventions to be used; and procedures for compiling/assembling, linking, and building the CSCI and the software system/subsystem containing the CSCI, including variations for different sites, configurations, versions, etc. Build procedures above the CSCI level may be presented in one SPS and referenced from the others.

5.3 Modification procedures. This paragraph shall describe procedures that must be followed to modify the CSCI. It shall include or reference information on the following, as applicable:

- a. Support facilities, equipment, and software, and procedures for their use
- b. Databases/data files used by the CSCI and procedures for using and modifying them
- c. Design, coding, and other conventions to be followed
- d. Compilation/build procedures if different from those above
- e. Integration and testing procedures to be followed

5.4 Computer hardware resource utilization. This paragraph shall describe the "as built" CSCI's measured utilization of computer hardware resources (such as processor capacity, memory capacity, input/output device capacity, auxiliary storage capacity, and communications/network equipment capacity). It shall cover all computer hardware resources

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

included in utilization requirements for the CSCI, in system-level resource allocations affecting the CSCI, or in the software development plan. If all utilization data for a given computer hardware resource is presented in a single location, such as in one SPS, this paragraph may reference that source. Included for each computer hardware resource shall be:

- a. The CSCI requirements or system-level resource allocations being satisfied. (Alternatively, the traceability to CSCI requirements may be provided in 6.c.)
- b. The assumptions and conditions on which the utilization data are based (for example, typical usage, worst-case usage, assumption of certain events)
- c. Any special considerations affecting the utilization (such as use of virtual memory, overlays, or multiprocessors or the impacts of operating system overhead, library software, or other implementation overhead)
- d. The units of measure used (such as percentage of processor capacity, cycles per second, bytes of memory, kilobytes per second)
- e. The level(s) at which the estimates or measures have been made (such as software unit, CSCI, or executable program)

6. Requirements traceability. This section shall provide:

- a. Traceability from each CSCI source file to the software unit(s) that it implements.
- b. Traceability from each software unit to the source files that implement it.
- c. Traceability from each computer hardware resource utilization measurement given in 5.4 to the CSCI requirements it addresses. (Alternatively, this traceability may be provided in 5.4.)
- d. Traceability from each CSCI requirement regarding computer hardware resource utilization to the utilization measurements given in 5.4.

7. Notes. This section shall contain any general information that aids in understanding this specification (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendixes. Appendixes may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).

A015

DATA ITEM DESCRIPTION		Form Approved OMB NO.0704-0188	
Public reporting burden for collection of the information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to Washington Headquarters Services, Directorate for Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.			
1. TITLE <b>SOFTWARE VERSION DESCRIPTION (SVD)</b>		2. IDENTIFICATION NUMBER <b>DI-IPSC-81442</b>	
3. DESCRIPTION/PURPOSE  3.1 The Software Version Description (SVD) identifies and describes a software version consisting of one or more Computer Software Configuration Items (CSCIs). It is used to release, track, and control software versions.  3.2 The term "version" may be applied to the initial release of the software, to a subsequent release of that software, or to one of multiple forms of the software released at approximately the same time (for example, to different sites).			
4. APPROVAL DATE (YYMMDD) 941205	5. OFFICE OF PRIMARY RESPONSIBILITY EC	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE
7. APPLICATION/INTERRELATIONSHIP  7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract.  7.2 This DID is used when the developer is tasked to identify and record the exact version of software to be delivered to a user, support, or other site.  7.3 The Contract Data Requirements List (CDRL) (DD 1423) should specify whether deliverable data are to be delivered on paper or electronic media; are to be in a given electronic form (such as ASCII, CALS, or compatible with a specified word processor or other support software); may be delivered in developer format rather than in the format specified herein; and may reside in a computer-aided software engineering (CASE) or other automated tool rather than in the form of a traditional document.  7.4 This DID supersedes DI-MCCR-80013A, and DI-MCCR-80312.			
8. APPROVAL LIMITATION Limited Approval from 12/5/94 through 12/5/96		9a. APPLICABLE FORMS	9b. AMSC NUMBER N7085
10. PREPARATION INSTRUCTIONS  10.1 <u>General instructions.</u>  a. <u>Automated techniques.</u> Use of automated techniques is encouraged. The term "document" in this DID means a collection of data regardless of its medium.  b. <u>Alternate presentation styles.</u> Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles.  (Continued on Page 2)			
11. DISTRIBUTION STATEMENT <b>DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.</b>			

Software Version Description (SVD)  
DI-IPSC-81442

10. PREPARATION INSTRUCTIONS -- 10.1 General Instructions (continued)

- c. Title page or identifier. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the system, subsystem, or item to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; and distribution statement. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.
- d. Table of contents. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.
- e. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.
- f. Response to tailoring instructions. If a paragraph is tailored out of this DID, the resulting document shall contain the corresponding paragraph number and title, followed by "This paragraph has been tailored out." For data in a database or other alternative form, this representation need occur only in the table of contents or equivalent.
- g. Multiple paragraphs and subparagraphs. Any section, paragraph, or subparagraph in this DID may be written as multiple paragraphs or subparagraphs to enhance readability.
- h. Standard data descriptions. If a data description required by this DID has been published in a standard data element dictionary specified in the contract, reference to an entry in that dictionary is preferred over including the description itself.
- i. Substitution of existing documents. Commercial or other existing documents may be substituted for all or part of the document if they contain the required data.

10.2 Content requirements. Content requirements begin on the following page. The numbers shown designate the paragraph numbers to be used in the document. Each such number is understood to have the prefix "10.2" within this DID. For example, the paragraph numbered 1.1 is understood to be paragraph 10.2.1.1 within this DID.

Software Version Description (SVD)  
DI-IPSC-81442

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain a full identification of the system and the software to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s). It shall also identify the intended recipients of the SVD to the extent that this identification affects the contents of the software released (for example, source code may not be released to all recipients.)

1.2 System overview. This paragraph shall briefly state the purpose of the system and the software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 Document overview. This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this document. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Version description. This section shall be divided into the following paragraphs.

3.1 Inventory of materials released. This paragraph shall list by identifying numbers, titles, abbreviations, dates, version numbers, and release numbers, as applicable, all physical media (for example, listings, tapes, disks) and associated documentation that make up the software version being released. It shall include applicable security and privacy considerations for these items, safeguards for handling them, such as concerns for static and magnetic fields, and instructions and restrictions regarding duplication and license provisions.

3.2 Inventory of software contents. This paragraph shall list by identifying numbers, titles, abbreviations, dates, version numbers, and release numbers, as applicable, all computer files that make up the software version being released. Any applicable security and privacy considerations shall be included.

3.3 Changes installed. This paragraph shall contain a list of all changes incorporated into the software version since the previous version. If change classes have been used, such as the Class I/Class II changes in MIL-STD-973, the changes shall be separated into these classes. This paragraph shall identify, as applicable, the problem reports, change proposals, and change notices associated with each change and the effects, if any, of each change on system operation and on interfaces with other hardware and software. This paragraph does not apply to the initial software version.

3.4 Adaptation data. This paragraph shall identify or reference all unique-to-site data contained in the software version. For software versions after the first, this paragraph shall describe changes made to the adaptation data.

Software Version Description (SVD)  
DI-IPSC-81442

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

3.5 Related documents. This paragraph shall list by identifying numbers, titles, abbreviations, dates, version numbers, and release numbers, as applicable, all documents pertinent to the software version being released but not included in the release.

3.6 Installation instructions. This paragraph shall provide or reference the following information, as applicable:

- a. Instructions for installing the software version
- b. Identification of other changes that have to be installed for this version to be used, including site-unique adaptation data not included in the software version
- c. Security, privacy, or safety precautions relevant to the installation
- d. Procedures for determining whether the version has been installed properly
- e. A point of contact to be consulted if there are problems or questions with the installation

3.7 Possible problems and known errors. This paragraph shall identify any possible problems or known errors with the software version at the time of release, any steps being taken to resolve the problems or errors, and instructions (either directly or by reference) for recognizing, avoiding, correcting, or otherwise handling each one. The information presented shall be appropriate to the intended recipient of the SVD (for example, a user agency may need advice on avoiding errors, a support agency on correcting them).

4. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendixes. Appendixes may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).

A216

DATA ITEM DESCRIPTION		Form Approved OMB No. 0704-0188	
<small>Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, D.C. 20503.</small>			
<b>1. TITLE</b> Government Furnished Material (GFM) and End Item Transaction Report  <b>Technical Report - Study/Services</b>		<b>2. IDENTIFICATION NUMBER</b>  DI-MISC-80508	
<b>3. DESCRIPTION/PURPOSE</b> 3.1 A technical report provides fully documented results of studies or analysis performed.			
<b>4. APPROVAL DATE</b> (YYMMDD)  <b>880115</b>	<b>5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)</b>  G/T2137	<b>6a. DTIC APPLICABLE</b>  <b>X</b>	<b>6b. GIDEP APPLICABLE</b>
<b>7. APPLICATION/INTERRELATIONSHIP</b> 7.1 This data item description contains the format and content preparation instructions for the data product generated by the specific and discrete task requirement as delineated in the contract.  7.2 This DID supersedes DI-A-5029.  7.3 Defense Technical Information Center (DTIC), Cameron Station, Alexandria, VA 22314.			
<b>8. APPROVAL LIMITATION</b>		<b>9a. APPLICABLE FORMS</b>	<b>9b. AMSC NUMBER</b>  <b>G4291</b>
<b>10. PREPARATION INSTRUCTIONS</b> 10.1 <u>Format</u>  (a) The report and all attachments shall be typewritten or otherwise clearly lettered, and shall be duplicated using non-fading ink. (b) Text shall be prepared on standard letter size paper(8 1/2" X 11"). (c) When attachments are included, they shall be fully identified, referenced in the text, and folded to conform to the size paper used in the report. (d) Security classification and distribution markings shall conform to the requirements of the contract, purchase description and security requirements checklist, as applicable.  10.2 <u>Content</u>  (a) Title page - Identifies the report by providing contract number, project name or purchase description title, task number, and reporting period. (continued on page 2)			
<b>11. DISTRIBUTION STATEMENT</b>  DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.			

DI-MGMT-80508

Block 10. Preparation Instructions (Continued)

- (b) Table of Contents
- (c) Section I - Includes the following:
  - (1) Introduction
  - (2) Summary - A brief statement of results obtained from the analytic effort.
  - (3) Conclusions and their condensed technical substantiations.
- (d) Section II - A complete and detailed description of the analytic results which led to the conclusions stated in Section I above.



A017

<b>DATA ITEM DESCRIPTION</b>			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington, DC 20503.				
1. TITLE PRODUCT/ASSET CONFIGURATION DATA INFORMATION PACKET			2. IDENTIFICATION NUMBER  DI-CMAN-81553	
3. DESCRIPTION/PURPOSE Product/asset configuration information provides a record of the configuration of specific serialized/lotted parts and assemblies as they are delivered and provides a continuing record of their configuration as various maintenance and retrofit actions are completed.				
4. APPROVAL DATE (YYMMDD) 970630	5. OFFICE OF PRIMARY RESPONSIBILITY(OPR)  DO	6a. DTIC REQUIRED	6b. GIDEP REQUIRED	
7. APPLICATION/INTERRELATIONSHIP 7.1 This Data Item Description (DID) contains the format, content, and interrelationship requirements for Product/Asset Configuration Information resulting from the work task described in the contract SOW. This DID is applicable to the acquisition and support of systems, equipment, software, and components for military use. 7.2 It is not intended that all of the requirements contained herein should be applied to every program. This DID should be tailored to the minimum acceptable data requirements of the applicable contract or purchase order. Data information subpacket selection and ordering guidance can be found in MIL-STD-2549, Appendix A.				
8. APPROVAL LIMITATION		9a. APPLICABLE FORMS		9b. AMSC NUMBER  D7269
10. PREPARATION INSTRUCTIONS 10.1 <u>Reference Documents</u> . The applicable issue of the documents cited herein, including their approval dates and the dates of applicable amendments and revisions, shall be as cited in the current issue of the DODISS at the time of the solicitation.  10.2 <u>Format and content</u> . The format and content (including the sequencing of data fields) of the specific data information subpackets ordered in the CDRL shall be in accordance with the requirements of Table DIP3-I of MIL-STD-2549.  <u>Subpacket 3A</u> . Basic part/material identification <u>Subpacket 3B</u> . Basic part/material traceability information <u>Subpacket 3C</u> . As-built/as delivered configuration <u>Subpacket 3D</u> . Changes to assemblies (remove and replace, etc.) <u>Subpacket 3E</u> . Changes as a result of regrouping <u>Subpacket 3F</u> . Changes as a result of part modification <u>Subpacket 3G</u> . NSN assignment <u>Subpacket 3H</u> . Replacement/superseded/substitute parts/material information and company-assigned equivalent part/material identifiers				
11. DISTRIBUTION STATEMENT  DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.				

DI-MGMT-80909 MG 9999989 0008434 9

MAY-30-90 WED 15:09 IHS-ORDER ENTRY

P.02

MAY 30 '90 15:01 (703)756-7622

P.2/3

DATA ITEM DESCRIPTION		Form Approved OMB No. 0704-0188	
1. TITLE  Program Plan		2. IDENTIFICATION NUMBER  DI-MGMT-80909	
3. DESCRIPTION/PURPOSE  3.1 The Program Plan provides technical, management, schedule, and cost data. 3.2 The Program Plan provides current information which is used to describe the approach, resources and needs of the contractor to perform the effort.			
4. APPROVAL DATE (YYMMDD)  891006	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)  A/CSSD-BM	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE
7. APPLICATION/INTERRELATIONSHIP  7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by the specific and discrete task requirement as delineated in the contract. 7.2 This DID relates to the requirements of MIL-STD-881A. 7.3 The DID supersedes DI-A-1021.			
8. APPROVAL LIMITATION		9a. APPLICABLE FORMS	9b. ANSC NUMBER  A4842
10. PREPARATION INSTRUCTIONS  10.1 <b>Format.</b> The Program Plan format shall be contractor selected. The submission shall be securely bound 8 1/2 X 11 inch white paper. One way foldouts may be used for graphic material. Every effort shall be made to keep the plan unclassified.  10.2 <b>Content.</b> The Program Plan shall be an integrated document showing technical, cost and schedule data to a common base, the contract work breakdown structure (CWBS) or its planning equivalent. It shall also provide information on the contractor's organization and practices and techniques to be used in managing the program, specifically management of subcontracts.  10.2.1 The plan shall specifically contain the following: a. Introduction to the plan. b. Indication of the relationship of the plan to the CWBS. This shall include a description of each element and the cost associated with each element.  (Continued on Page 2)			
11. DISTRIBUTION STATEMENT  DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.			

DD Form 1664, MAR 87

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P.03

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DI-MGMT-80909

P.3/3

**Block 10. Preparation Instructions (continued)**

c. Milestone chart. A detailed program milestone chart covering the major activities of the program (system deliveries, tests, etc) by CWBS, if applicable, and in linear time phasing.

d. Equipment/facilities chart. A chart depicting major government furnished equipment (GFE) and facilities required, and the date and duration that such GFE or facilities are required.

e. Purchase chart. A chart depicting major subcontracts and equipment or material purchases, the date and approximate amount of each.

f. Labor loading chart. A chart depicting estimated labor hours for each major task.

g. Cost chart. A cost chart depicting by month the estimated cost, including subcontractor cost, for each major task.

h. Technical performance in terms of specific technical parameters used for measuring technical progress, if appropriate. Each parameter shall be identified, related to a specific paragraph in the Prime Item Development Specification (if available) and provided a base value and any limits.

i. Organization data including:

(1) Program organization chart. A chart showing the structure of the program organization by title and name. Identify the program office, support contractors, and major subcontractors.

(2) Program/functional organization relationship chart. A chart showing the relationship of the program functions to the functional organizations indicating lines of authority and communications.

10.2.2 When the CWBS is a requirement, show program responsibilities vs. WBS element one level below the WBS. The matrix shall depict the organizations responsible for performance, review and approval of each summary WBS. A description of authority and responsibilities of key program and functional individuals shall be identified on the charts.

Page 2 of 2 pages

2019

DATA ITEM DESCRIPTION				Form Approved OMB No. 0704-0188	
2. TITLE <b>STATUS REPORT</b>			1. IDENTIFICATION NUMBER <b>DI-MGMT- 80368</b>		
3. DESCRIPTION / PURPOSE <b>3.1 The Status Report documents the status of contractor effort towards achieving contract objectives. It identifies accomplishments to date and difficulties encountered, and compares the status achieved to planned goals and the resources expended. It is used by the Government to monitor and evaluate contractor performance.</b>					
4. APPROVAL DATE (YYMMDD) <b>870608</b>	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR) <b>G/T213</b>		6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE	
7. APPLICATION / INTERRELATIONSHIP <b>7.1 This data item description (DID) contains the format and content preparation instructions for the data product generated by the specific and discrete task requirement as delineated in the contract.</b> <b>7.2 It is not intended that all the requirements herein should be applied to every program. Portions of this DID are subject to tailoring by deletion depending on the specific status reporting requirements of the project. (Continued on Page 2)</b>					
8. APPROVAL LIMITATION		9a. APPLICABLE FORMS		9b. AMSC NUMBER <b>G4130</b>	
10. PREPARATION INSTRUCTIONS <b>10.1 Format. The Status Report may be in contractor format.</b> <b>10.1.1 Identification. The data indicated below shall be contained on a title page or on the first page of the report.</b> <ul style="list-style-type: none"> <li>a. Title/identification of the system/component/program/project.</li> <li>b. Type of report (e.g., monthly, interim, final).</li> <li>c. Period covered by the report.</li> <li>d. Contract number.</li> <li>e. Preparing activity or contractor's title.</li> <li>f. Security classification, when required.</li> <li>g. Distribution Statement</li> </ul> <b>10.1.2 Page size. The report shall be on 8 1/2 by 11 inch (metric A4) paper.</b> <b>10.2 Content. The report shall contain the following:</b> <b>10.2.1 Summary. The summary shall include a brief statement of the overall project status, covering the accomplished technical activities and development, objectives of efforts, summary results of efforts, identification of major problems/deficiencies with impact, and recommended solutions.</b> <b>10.2.2 Body of report. The Status Report shall contain the following items, where applicable: (Continued on Page 2)</b>					
11. DISTRIBUTION STATEMENT  <b>DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.</b>					

Block 7, Application/Interrelationship (Continued)

7.3 This DID is related to DI-FNCL-80331, Funds and Man-Hour Expenditure Report which can be used in conjunction with this report if Block 10 paragraph 10.2.2.3 below is deleted.

7.4 This data item description supersedes DI-A-5004A, DI-A-5008A, DI-A-5028, and DI-E-5039B.

Block 10, Preparation Instructions (Continued)

10.2.2.1 Milestone/task status. The status of each milestone/task as defined by the statement of work or contract, as applicable:

- a. A statement as to whether or not the program/project/task is on schedule; if not, the effort planned to meet the schedule shall be indicated. Include an overall status of each milestone, task, or unit of work. Include updated schedule sheets, milestone charts, or task synopsis sheets identifying phase of task and percentage of completion of each task, technical instruction, or order.
- b. A comparison of achieved end-product performance capabilities projected against contract baseline values, requirements, or allocations.
- c. Effort expended on each task to date, and a brief description of technical developments and accomplishments.
- d. Key dates in any testing program and a description of tests performed and significant test results. If applicable, a description of the amount and type of down time on the equipment or system under test.
- e. A list of all designs completed and a brief description of each item. For designs in process, provide estimated dates for design and drawing completion.
- f. A narrative of outstanding problems existing as of the previous status report, and their resolution status.
- g. New problem areas encountered or anticipated, their effect on the overall work effort/project, and steps being taken to remedy problem situations.
- h. Significant results of conferences, trips, or directives from the Contracting officer's representatives.
- i. Any other information which may cause significant changes in the program schedule.

10.2.2.2 Future plans. Summary of future plans, recommendations and proposals both for the next reporting period and for any long term plans.

10.2.2.3 Itemized man-hours and costs. Itemized man-hour and cost expenditure incurred for the reporting period by category and task, total contractual expenditures, and funds remaining as of the reporting date.

Block 10, Preparation Instructions (Continued)

10.2.2.4 Contract deliveries status. The status of each deliverable end item, including data deliveries, as required by the contract. Provide item and contract identification, shipping/transmittal data, acceptance status, security classification, and scheduled due date information.

10.2.2.5 Report preparer. Name of person(s) preparing report and telephone number(s).

10.2.3 Appendices. Appendices, where applicable, for tables, references, charts, or other descriptive material. Each appendix shall be identified and referenced in the appropriate area of the report.

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DATA ITEM DESCRIPTION		Form Approved OMB No. 0704-0188	
1. TITLE  Scientific and Technical Reports		2. IDENTIFICATION NUMBER  DI-MISC -80711	
3. DESCRIPTION/PURPOSE  3.1 Scientific and Technical Reports describe and disseminate to the analytical, scientific and technical community the precise nature and results of analytical studies, research, development, test and evaluation (RDT&E) on an assigned task(s). Scientific and Technical Reports may be definitive for the subject presented, exploratory in nature, or an evaluation of critical subsystem or of technical problems.			
4. APPROVAL DATE (YYMMDD) 881202	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR) S/DD	6a. DTIC APPLICABLE X	6b. GIDEP APPLICABLE
7. APPLICATION/INTERRELATIONSHIP  7.1 This DID contains the format requirements and preparation instructions for the information product generated by the specific and discrete task requirement as delineated in the contract. 7.2 This DID is applicable to the organization, preparation and production of technical publications. 7.3 This DID supersedes UDI-S-23272G, DI-S-4057 and DI-S-3591A. 7.4 Defense Technical Information Center (DTIC) Cameron Station Alexandria, VA 22304-6145			
8. APPROVAL LIMITATION		9a. APPLICABLE FORMS SF 298	9b. AMSC NUMBER S4578
10. PREPARATION INSTRUCTIONS  10.1 <u>Reference document.</u> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendments, notices, and revisions, shall be as specified in the contract. 10.2 Document format shall be in accordance with ANSI Z39.18 Scientific and Technical Reports: Organization, Preparation and Production. 10.3 Document content shall be clearly written, describe accomplishments and other facts adequately and with no technical errors; and be acceptable for release. If Scientific and Technical Reports when sent to DTIC are marked unclassified unlimited they should be accompanied by a letter certifying that they have been cleared for public release and sale; to include foreign nationals.			
11. DISTRIBUTION STATEMENT  DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.			

DD Form 1664, MAR 87

Jun 86 edition may be used until exhausted.

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★ U.S. GOVERNMENT PRINTING OFFICE: 1969 604-033/80100

# DATA ITEM DESCRIPTION

Form Approved  
OMB NO. 0704-0188

Public reporting burden for collection of this information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to Washington Headquarters Services, Directorate for Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. TITLE

INTERFACE DESIGN DESCRIPTION (IDD)

2. IDENTIFICATION NUMBER

DI-IPSC-81436

3. DESCRIPTION/PURPOSE

3.1 The Interface Design Description (IDD) describes the interface characteristics of one or more systems, subsystems, Hardware Configuration Items (HWCI), Computer Software Configuration Items (CSCI), manual operations, or other system components. An IDD may describe any number of interfaces.

3.2 The IDD can be used to supplement the System/Subsystem Design Description (SSDD) (DI-IPSC-81432), Software Design Description (SDD) (DI-IPSC-81435), and Database Design Description (DBDD) (DI-IPSC-81437). The IDD and its companion Interface Requirements Specification (IRS) (DI-IPSC-81434) serve to communicate and control interface design decisions.

4. APPROVAL DATE

(YYMMDD) 941205

5. OFFICE OF PRIMARY RESPONSIBILITY

EC

6a. DTIC APPLICABLE

6b. GIDEP APPLICABLE

7. APPLICATION/INTERRELATIONSHIP

7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract.

7.2 This DID is used when the developer is tasked to define and record the interface design of one or more systems, subsystems, HWCI, CSCI, manual operations, or other system components.

7.3 The IRS specifies interface requirements; the IDD describes interface characteristics selected to meet those requirements. The IDD may reference the IRS to avoid repeating information. The IDD can be used to supplement the SSDD, SDD, or DBDD.

7.4 The Contract Data Requirements List (CDRL) (DD 1423) should specify whether deliverable data are to be delivered on paper or electronic media; are to be in a given electronic form (such as ASCII, CALS, or compatible with a specified word processor or other support software); may be delivered in developer format rather than in the format specified herein; and may reside in a computer-aided software engineering (CASE) or other automated tool rather than in the form of a traditional document.

7.5 This DID supersedes DI-MCCR-80027A.

8. APPROVAL LIMITATION

Limited Approval from 12/5/94 through 12/5/96

9a. APPLICABLE FORMS

9b. AMSC NUMBER

N7079

10. PREPARATION INSTRUCTIONS

10.1 General instructions.

a. Automated techniques. Use of automated techniques is encouraged. The term "document" in this DID means a collection of data regardless of its medium.

b. Alternate presentation styles. Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles.

(Continued on Page 2)

11. DISTRIBUTION STATEMENT

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.



Interface Design Description (IDD)  
DI-IPSC-81436

10. PREPARATION INSTRUCTIONS -- 10.1 General Instructions (continued)

- c. Title page or identifier with signature blocks. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the systems, subsystems, or items to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; distribution statement; and signature blocks for the developer representative authorized to release the document, the acquirer representative authorized to approve the document, and the dates of release/approval. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.
- d. Table of contents. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.
- e. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.
- f. Response to tailoring instructions. If a paragraph is tailored out of this DID, the resulting document shall contain the corresponding paragraph number and title, followed by "This paragraph has been tailored out." For data in a database or other alternative form, this representation need occur only in the table of contents or equivalent.
- g. Multiple paragraphs and subparagraphs. Any section, paragraph, or subparagraph in this DID may be written as multiple paragraphs or subparagraphs to enhance readability.
- h. Standard data descriptions. If a data description required by this DID has been published in a standard data element dictionary specified in the contract, reference to an entry in that dictionary is preferred over including the description itself.
- i. Substitution of existing documents. Commercial or other existing documents may be substituted for all or part of the document if they contain the required data.

10.2 Content requirements. Content requirements begin on the following page. The numbers shown designate the paragraph numbers to be used in the document. Each such number is understood to have the prefix "10.2" within this DID. For example, the paragraph numbered 1.1 is understood to be paragraph 10.2.1.1 within this DID.

Interface Design Description (IDD)  
DI-IPSC-81436

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain a full identification of the system(s), the interfacing entities, and interfaces to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2 System overview. This paragraph shall briefly state the purpose of the system(s) and software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 Document overview. This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this document. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Interface design. This section shall be divided into the following paragraphs to describe the interface characteristics of one or more systems, subsystems, configuration items, manual operations, or other system components. If part or all of the design depends upon system states or modes, this dependency shall be indicated. If design information falls into more than one paragraph, it may be presented once and referenced from the other paragraphs. If part or all of this information is documented elsewhere, it may be referenced. Design conventions needed to understand the design shall be presented or referenced.

3.1 Interface identification and diagrams. For each interface identified in 1.1, this paragraph shall state the project-unique identifier assigned to the interface and shall identify the interfacing entities (systems, configuration items, users, etc.) by name, number, version, and documentation references, as applicable. The identification shall state which entities have fixed interface characteristics (and therefore impose interface requirements on interfacing entities) and which are being developed or modified (thus having interface requirements imposed on them). One or more interface diagrams shall be provided, as appropriate, to depict the interfaces.

3.x (Project-unique identifier of interface). This paragraph (beginning with 3.2) shall identify an interface by project-unique identifier, shall briefly identify the interfacing entities, and shall be divided into subparagraphs as needed to describe the interface characteristics of one or both of the interfacing entities. If a given interfacing entity is not covered by this IDD (for example, an external system) but its interface characteristics need to be mentioned to describe interfacing entities that are, these characteristics shall be stated as assumptions or as "When [the entity not covered] does this, [the entity that is covered] will ...." This paragraph may reference other documents (such as data dictionaries, standards for protocols, and standards for user interfaces) in place of stating the information here. The design description shall include the following, as applicable, presented in any order suited to the information to be provided, and shall note any differences in these characteristics from the point of view of the interfacing entities (such as different expectations about the size, frequency, or other characteristics of data elements):

Interface Design Description (IDD)  
DI-IPSC-81436

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- a. Priority assigned to the interface by the interfacing entity(ies)
- b. Type of interface (such as real-time data transfer, storage-and-retrieval of data, etc.) to be implemented
- c. Characteristics of individual data elements that the interfacing entity(ies) will provide, store, send, access, receive, etc., such as:
  - 1) Names/identifiers
    - a) Project-unique identifier
    - b) Non-technical (natural-language) name
    - c) DoD standard data element name
    - d) Technical name (e.g., variable or field name in code or database)
    - e) Abbreviation or synonymous names
  - 2) Data type (alphanumeric, integer, etc.)
  - 3) Size and format (such as length and punctuation of a character string)
  - 4) Units of measurement (such as meters, dollars, nanoseconds)
  - 5) Range or enumeration of possible values (such as 0-99)
  - 6) Accuracy (how correct) and precision (number of significant digits)
  - 7) Priority, timing, frequency, volume, sequencing, and other constraints, such as whether the data element may be updated and whether business rules apply
  - 8) Security and privacy constraints
  - 9) Sources (setting/sending entities) and recipients (using/receiving entities)
- d. Characteristics of data element assemblies (records, messages, files, arrays, displays, reports, etc.) that the interfacing entity(ies) will provide, store, send, access, receive, etc., such as:
  - 1) Names/identifiers
    - a) Project-unique identifier
    - b) Non-technical (natural language) name
    - c) Technical name (e.g., record or data structure name in code or database)
    - d) Abbreviations or synonymous names
  - 2) Data elements in the assembly and their structure (number, order, grouping)
  - 3) Medium (such as disk) and structure of data elements/assemblies on the medium
  - 4) Visual and auditory characteristics of displays and other outputs (such as colors, layouts, fonts, icons and other display elements, beeps, lights)
  - 5) Relationships among assemblies, such as sorting/access characteristics
  - 6) Priority, timing, frequency, volume, sequencing, and other constraints, such as whether the assembly may be updated and whether business rules apply
  - 7) Security and privacy constraints
  - 8) Sources (setting/sending entities) and recipients (using/receiving entities)

Interface Design Description (IDD)  
DI-IPSC-81436

10. PREPARATION INSTRUCTIONS -- 10.2 Content Requirements (continued)

- e. Characteristics of communication methods that the interfacing entity(ies) will use for the interface, such as:
    - 1) Project-unique identifier(s)
    - 2) Communication links/bands/frequencies/media and their characteristics
    - 3) Message formatting
    - 4) Flow control (such as sequence numbering and buffer allocation)
    - 5) Data transfer rate, whether periodic/aperiodic, and interval between transfers
    - 6) Routing, addressing, and naming conventions
    - 7) Transmission services, including priority and grade
    - 8) Safety/security/privacy considerations, such as encryption, user authentication, compartmentalization, and auditing
  - f. Characteristics of protocols the interfacing entity(ies) will use for the interface, such as:
    - 1) Project-unique identifier(s)
    - 2) Priority/layer of the protocol
    - 3) Packeting, including fragmentation and reassembly, routing, and addressing
    - 4) Legality checks, error control, and recovery procedures
    - 5) Synchronization, including connection establishment, maintenance, termination
    - 6) Status, identification, and any other reporting features
  - g. Other characteristics, such as physical compatibility of the interfacing entity(ies) (dimensions, tolerances, loads, voltages, plug compatibility, etc.)
4. Requirements traceability. This paragraph shall contain:
- a. Traceability from each interfacing entity covered by this IDD to the system or CSCI requirements addressed by the entity's interface design.
  - b. Traceability from each system or CSCI requirement that affects an interface covered in this IDD to the interfacing entities that address it.
5. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.
- A. Appendixes. Appendixes may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).

1022

DATA ITEM DESCRIPTION		Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.			
1. TITLE  Presentation Material		2. IDENTIFICATION NUMBER  DI-ADMN-81373	
3. DESCRIPTION / PURPOSE  3.1 Presentation materials are audiovisual aids, such as viewgraphs, photographs, slides or electronic equivalent. They are used to present information during reviews, briefings, and similar activities involving more than one person.			
4. APPROVAL DATE (YYMMDD)  931001	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)  F/ESC/EN-4	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE
7. APPLICATION / INTERRELATIONSHIP  7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by the specific and discrete task requirement as delineated in the contract.  7.2 This DID may be applied on any acquisition.  7.3 This DID supersedes DI-A-3024A.			
8. APPROVAL LIMITATION	9a. APPLICABLE FORMS	9b. AMSC NUMBER  F6970	
10. PREPARATION INSTRUCTIONS  10.1 <u>Format</u> . Contractor format is acceptable, with the exception that the government must approve the use of any contractor insignia, trade names or symbols. Delivery media format shall be defined on the DD Form 1423, Contract Data Requirements List.  10.2 <u>Content</u> . Presentation material shall include a text of any accompanying verbal material unless the verbal portion is included as part of an electronic presentation. In either case the text or audio shall include the following statement:  "The publication of this material does not constitute approval by the government of the findings or conclusion herein. Wide distribution or announcement of this material shall not be made without specific approval by the sponsoring government activity."			
11. DISTRIBUTION  DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.			

ATTACHMENTS TO EXHIBIT(s) A , , , &  
DISTRIBUTION ADDRESSEE'S LIST (DAL) BEGINS ON PAGE V

GENERAL DD FORM 1423-GLOSSARY

1. PREPARATION OF DD FORM 1423. The actual completion of the DD Form 1423 may be performed by the Requiring Technical Activity (RTA), or the Department,s Data Manager (DM).

1.1 DATA ENTRY TO THE DD FORM 1423. The following information shall be utilized by all NWSCC Crane personnel and supporting contractors when entering data into the appropriate blocks of the DD Form 1423.

1.1.1 BLOCK A. Contract Line Item No. (CLIN) - Enter the CLIN that is associated with the CDRL.

1.1.2 BLOCK B. Exh/Atch No. - Enter the exhibit or attachment number for the CDRL (DFARS 204.7105-3). (NOTE: Section 215.406 of DFARS prohibits the use of a DD Form 1423 as an attachment for technical data. Therefore, CDRLS for Technical Data Packages (TDPs) and Technical Manuals (TMs) shall be designated exhibits).

1.1.3 BLOCK C. Category - Check the appropriate block for Technical Data Package (TDP) or Technical Manual (TM). Types of data which comprise a TDP are defined in MIL-STD-31000, and types of manuals included under the TM category are defined in DoDI 4151.9. The "Other" block is to be checked if the CDRL is not considered a TDP or TM.

1.1.4 BLOCK D. System/Item - Enter the system, item, project designator or name of the item or services being procured.

1.1.5 BLOCK E. Contract/PR No. - Enter the contractor's name in this space if the procurement is sole source. Following the contractor's name, a slash (/) and the contractor,s Commercial and Government Entity (CAGE) Code, (formerly, Federal Supply Manufacturer,s Code (FSCM)) May be inserted. The code may be obtained from DoD Cataloging Handbook H-4.

1.1.6 BLOCK F. Contractor - Enter the contractor's name when known. Following the name, a slash (/) and the contractor,s Commercial and Government Entity (CAGE) code may be inserted.

1.1.7 BLOCK G. Prepared by - Enter the date the CDRL preparer's name and signature.

1.1.8 BLOCK H. Date - Enter the date the CDRL was prepared.

1.1.9 BLOCK I. Approved by - Enter the name and signature of the individual responsible for approving the CDRL.

1.1.10 BLOCK J. Date - Enter the date the CDRL was approved.

2. DETAILED CDRL INFORMATION (Blocks 1 through 16)

2.1 BLOCK 1, DATA ITEM NUMBER. Enter the CDRL sequence number in accordance with DFARS Section 204.7106-2. For exhibits, enter an Exhibit Line Item Number (ELIN). For attachments, enter a data item sequence number. (NOTE: The standard procedure is to start with A001 for Exhibits and continue with the sequence, e.g., A002, A003, etc.).

2.2 BLOCK 2, TITLE OF DATA ITEM. The title shall be identical to the title of the DID cited in Block 4 of the CDRL. When the CDRL is used to acquire weapon system technical manuals, the title of the specific Technical Manual being acquired shall be entered. (NOTE: If the exact title will not fit into block-2, then type (See Block 16) in block 2 and then in BLOCK 16 type BLOCK 2 - and the exact title of the Data Item Description. Use the same method if more than one DID is being referenced).

2.3 BLOCK 3, SUBTITLE OF DATA. If the title in Block 2 requires further identification, you may enter a subtitle.

## 2.4 BLOCK 4, AUTHORITY (DATA ACQUISITION DOCUMENT NUMBER)

2.4.1 Enter the DID identification number including the revision letter in accordance with the Acquisition Management Systems And Data Requirements Control List (AMSDL) (DoD 5010.12-L). If a Technical Manual is being acquired, enter the specific number of the applicable Military Standard or Specification which provides the data preparation instructions or if a Technical Manual Contract Requirements (TMCR) document is used enter "See TMCR \_\_\_\_\_" and attach the TMCR to the CDRL. The TMCR must list the applicable Military Standards and/or Specifications which provide the data preparation instructions. If more than one DID number is cited it indicates consolidation of two or more DIDs to meet the data requirements. The relationship of these DIDs will be further explained in Block 16. With the exception of a one-time DID, the document cited in this block (or listed in the TMCR, when used) must be one which is listed or cleared for listing in the AMSDL. NOTE: When interpreting the requirements of a DID (DD Form 1664), only Block 10 of the DID is contractually binding on the contractor, the remaining blocks are for information only.

TMCRs are prepared by the NAVAL SEA DATA SUPPORT ACTIVITY, NAVAL SHIPWEAPON SYSTEMS ENGINEERING STATION, POKT HUENEME, CA 93043-5007 by Direction of NAVAL SEA SYSTEMS COMMAND (CEL-TD). Requests for TMCRs are to be submitted to the above address on NAVSEA Form 9086/12 (3/88).

2.4.2 Each line item of data specified on the DD Form 1423 shall be supported with a DID, unless a TMCR, MIL-STD or Specification is used. Standard DIDs from the AMSDL shall be selected and "used as-is", or with nonapplicable requirements tailored out. Tailoring instructions are entered in the remarks section (Block 16). If more than one data item is used to construct a specific data requirement, each data item will be separately listed on the CDRL, and block 16 may be used to indicate the relationship, (for example, "Combine with contract data item XX for submission:" or "Data prepared in accordance with Data Item Description DI-MGMT-XXXX).

## 2.5 BLOCK 5, CONTRACT REFERENCE

Enter the specific contract line item number (CLIN) of the contract, paragraph number of the Statement of Work, Purchase Request, specification or standard or any other applicable reference which contains the tasking that generates the requirement for the data item authorized in block 4.

Block 5 must be completed. The data being ordered is the result of some document in the contract which contains the tasking which generates a requirement for the data item.

## 2.6 BLOCK 6, REQUIRING OFFICE

Enter the technical office of primary responsibility for determining the technical adequacy of the data. This may be the accepting, requiring, using, or inspecting office depending on the type of data and decisions made relative to quality assurance responsibilities. The designated accepting office (block 7) will consult, if required, with the office listed in block 6 in performing the acceptance function.

## 2.7 BLOCK 7, DD 250 REQUIREMENT

The responsible manager (program, project, technical, etc.) will designate the location, "source" (contractor,s facility) or "destination" for performance of inspection and acceptance of the data item. This is accomplished by entering the applicable code listed below. The activity to perform the destination acceptance task will be entered in block 14 as the first addressee. ("same as block 6" if appropriate.)

<u>DD 250 Code</u>	<u>Inspection</u>	<u>Acceptance</u>
SS	(1)	(2)
DD	(3)	(4)
SD	(1)	(4)
DS	(3)	(5)
LT*	(6)	(7)
NO**	(8)	(8)
xx	(9)	(9)

Inspection at source.

- (1) Acceptance at source.
- (2) No inspection performed at source. Final inspection performed at destination.
- (3) Acceptance at destination.
- (4) Acceptance at source. Acceptance based on written approval from the Contracting Officer.
- (5) Letter of Transmittal only. LT shall not be used when inspection is required. The data is sent by the contractor directly to the code(s) identified in block 14 of the DD Form 1423. LT is used when the contracting agency does not need to have a DD Form 250 for each and every piece of data developed by the contractor. \*Use of the symbol "LT" is not authorized for data comprising Technical Data Packages (such as drawings and/or specifications) or Technical Manuals.
- (6) The acceptance criteria is specified by the DID which establishes content and format.
- (7) No inspection or acceptance is required. No DD Form 250 or LT is required. \*\*Use of the symbol "NO" is not authorized for data comprising Technical Data Packages or Technical manuals.
- (8) Inspection and Acceptance requirements are specified in the contract.

## 2.8 BLOCK 8, APPROVAL CODE

2.8.1 Items of critical data requiring specific advance written approval (such as acceptance test procedures) should be identified by placing an "A" in this block. These data items require submission of a preliminary draft prior to publication of a final document. When a preliminary draft is required, block 16 of the DD Form 1423 must indicate the length of time allotted for the Government's approval/disapproval and the subsequent turn around time for the contractor to resubmit the data. Block 16 must also indicate the extent of the approval requirement; i.e., approval of technical content and/or format, verification and validation, etc.

## 2.9 BLOCK 9, DISTRIBUTION STATEMENT REQUIRED

2.9.1 Enter "See Block 16" to indicate the appropriate block to specify the applicable Distribution Statement for each ELIN (See DoD-D-5230.24 and DoD-D-5230.25 for selection and usage of Distribution Statements).

## 2.10 BLOCK 10, FREQUENCY

2.10.1 The following is a list of typical codes used to specify frequency of submittal. Any other type of frequency will specify "see Block 16" and in BLOCK 16 describe the required frequency for that ELIN. (NOTE: When "ASREQ" is used, an entry is required in Block 16 describing what event causes the "as required").

ANNLY	Annually
ASGEN	As generated
ASREQ	As required
BI-MO	Every two months
BI-WE	Every two weeks
DAILY	Daily
DFDEL	Deferred Delivery
MTHLY	Monthly
ONE-R	One time with revision
OTIME	One time
QTRLY	Quarterly
SEMIA	Every six months
WEKLY	Weekly
XTIME	Multiple separate submittal (e.g., 2TIME, 3TIME, ETC.)

## 2.11 BLOCK 11, AS OF DATE

2.11.1 If the data is submitted only once, enter the "as of" date as follows: year/month/day (e.g., 90Jun29). If the data is submitted multiple times, enter the number of days prior to the end of the reporting period. For example, "5" would place the "as of" data for the data 5 days before the end- of the month, quarter, or year, depending on the frequency established in



Block 10; a "0" would place the "as of" date at the end of each month, quarter, etc.. If an "as of" date is not applicable, leave this block blank. (NOTE: An entry is required in Block 13 when Block 11 is used).

## 2.12 BLOCK 12, DATE OF FIRST SUBMISSION

2.12.1 Enter the initial submission date as follows: Year/Month/Day (e.g., "90Jun29"). If the submittal is constrained by a specific event or milestone, enter this constraint. If the contract start date is not known, indicate the number of days after contract (DAC) start that the data is due (for example, "30DAC"). (NOTE 1: When "ASREQ" is used, an entry is required in Block 16 describing what event causes the "as required"). (NOTE 2: DO NOT INSERT CLASSIFIED DATES. Typical abbreviations in Block 12 are:

ASGEN	As generated
ASREQ	As required
DAC	Days after contract start or effective date
DFDEL	Deferred Delivery
EOC	End of contract
EOM	End of month
ECQ	End of quarter
DARP	Days after reporting period
DARC	Days after receipt of comments

## 2.13 BLOCK 13, DATE OF SUBSEQUENT SUBMISSION

2.13.1 If data is submitted more than once enter the date(s) of subsequent submission(s). If submittal is constrained by a specific event or milestone, enter this constraint. The abbreviations: described for Block 12 may be used in Block 13, (NOTE 1: When "ASREQ" is used, an entry is required in Block 16 describing what event causes the "as required"). (NOTE 2: DO NOT INSERT CLASSIFIED DATES.)

## 2.14 BLOCK 14, DISTRIBUTION

2.14.1 Enter the addressees and the number of draft, final or reproducible copies to be provided to each. The literal address may be used or the applicable codes, for example, DAL-01, DAL-02, etc.. The first addressee should be the acceptance activity for the data if acceptance by DD 250 is to be accomplished at the destination (see Block 7). If draft copies are required describe in Block 16 the event for the regular copies. If reproducible copies (e.g., magnetic media, vellum, negative, etc.) are required, explain in Block 16 the exact composition of the reproducible. If the data is not actually to be delivered to the Government or if deferred delivery is required, indicate by placing "DFDEL" in this Block and an explanation in Block 16.

## 2.15 TOTAL

2.15.1 Enter the total number of draft, regular or reproducible copies required by Block 14.

## 2.16 BLOCK 16, REMARKS

This block shall be used to provide additional or clarifying information for Blocks 1 through 15. This Block shall also be used to tailor the Data Item Description cited in Block 4. Tailoring may be accomplished by stating the deletions (e.g., "Block 4 - Block 10 of DID (DI-MGMT-80000) Delete paragraph 10.4") or by stating which requirements apply (e.g., "Block 4 - Block 10 of DID (DI-MGMT-80000) Only paragraphs 10.4 and 10.5 apply"), whichever is most efficient. Block 16 may also be used to specify the applicable format (e.g., "Block 4 - Block 10 of DID (DI-MGMT-80500) The plan, etc. shall be submitted in contractor format". Also the desired medium for delivery of the data is to be described. The applicable Distribution Statement designated by Block 9 will be described in full text.

### A. Detailed Block Information (Blocks 17 and 18)

These blocks are to be completed by the bidder or offerer, as required by the following (see reverse side of DD Form 1423 for further information):

(1) BLOCK 17, Price Group - Enter the appropriate price group as shown on the reverse side of the DD Form 1423 or as instructed in Sections "L" and "M" of the solicitation.

(2) BLOCK 18, Estimated Total Price - Enter the total estimated price equal to that portion of the total price which is estimated to be attributable to the production or development for the Government of that item of data. The entry "N/C" for "No Charge" is acceptable. The entry of "NSP" for "Not Separately Priced" should not be used unless approved in accordance with DoD Component procedures or follow instructions set forth in Sections "L", "M", or "H" of the solicitation.

NOTE: In accordance with Section 15.871 of the DFARS, the detachable portion of the DD Form 1423 (Blocks 17 and 18) with the estimated prices shall not appear in the contract.

DISTRIBUTION ADDRESSEE'S LIST (DAL)

DAL-01	Commander NAVSURFWARCENDIV Attn: Penny Smiddie, Code 604, B-2044 300 Highway 361 Crane, IN 47522-5011
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<b>DEPARTMENT OF DEFENSE</b> <b>CONTRACT SECURITY CLASSIFICATION SPECIFICATION</b> <i>(The requirements of the DoD Industrial Security Manual apply to all security aspects of this effort.)</i>				<b>1. CLEARANCE AND SAFEGUARDING</b> a. FACILITY CLEARANCE REQUIRED <div style="text-align: center;">SECRET</div> b. LEVEL OF SAFEGUARDING REQUIRED <div style="text-align: center;">SECRET</div>	
<b>2. THIS SPECIFICATION IS FOR: (X and complete as applicable)</b>				<b>3. THIS SPECIFICATION IS: (X and complete as applicable)</b>	
a. PRIME CONTRACT NUMBER		X		a. ORIGINAL (Complete date in all cases) Date (YYMMDD) 02/10/98	
b. SUBCONTRACT NUMBER				b. REVISED (Supersedes all previous specs) Revision No. Date (YYMMDD)	
c. SOLICITATION OR OTHER NUMBER N00164-98-R-0027		Due Date (YYMMDD)		c. FINAL (Complete item 5 in all cases) Date (YYMMDD)	
<b>4. IS THIS A FOLLOW-ON CONTRACT?</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO. If Yes, complete the following: Classified material received or generated under _____ (Preceding Contract Number) is transferred to this follow-on contract.					
<b>5. IS THIS A FINAL DD FORM 254?</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO. If Yes, complete the following: In response to the contractor's request dated _____, retention of the identified classified material is authorized for the period of _____.					
<b>6. CONTRACTOR</b> (Include Commercial and Government Entity (CAGE) Code)					
a. NAME, ADDRESS, AND ZIP CODE		b. CAGE CODE		c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code)	
<b>7. SUBCONTRACTOR</b>					
a. NAME, ADDRESS, AND ZIP CODE		b. CAGE CODE		c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code)	
<b>8. ACTUAL PERFORMANCE</b>					
a. LOCATION		b. CAGE CODE		c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code)	
<b>9. GENERAL IDENTIFICATION OF THIS PROCUREMENT</b>  A need was identified by the USMC for a means of integrating the U.S. Navy's CEC system into the USMC Aviation Command Element (ACE). More specifically, to correlate information received from the Navy's CEC link and from various air defense data links which have been forwarded/routed, and to output the correlated, formatted information to the USMC CEC system display and workstation Local Area Network (LAN).					
<b>10. THIS CONTRACT WILL REQUIRE ACCESS TO:</b>			<b>11. IN PERFORMING THIS CONTRACT, THE CONTRACTOR WILL:</b>		
	YES	NO		YES	NO
a. COMMUNICATIONS SECURITY (COMSEC) INFORMATION		<input checked="" type="checkbox"/>	a. HAVE ACCESS TO CLASSIFIED INFORMATION ONLY AT ANOTHER CONTRACTOR'S FACILITY OR A GOVERNMENT ACTIVITY		<input checked="" type="checkbox"/>
b. RESTRICTED DATA		<input checked="" type="checkbox"/>	b. RECEIVE CLASSIFIED DOCUMENTS ONLY		<input checked="" type="checkbox"/>
c. CRITICAL NUCLEAR WEAPON DESIGN INFORMATION		<input checked="" type="checkbox"/>	c. RECEIVE AND GENERATE CLASSIFIED MATERIAL	<input checked="" type="checkbox"/>	
d. FORMERLY RESTRICTED DATA		<input checked="" type="checkbox"/>	d. FABRICATE, MODIFY, OR STORE CLASSIFIED HARDWARE	<input checked="" type="checkbox"/>	
e. INTELLIGENCE INFORMATION:		<input checked="" type="checkbox"/>	e. PERFORM SERVICES ONLY		<input checked="" type="checkbox"/>
(1) Sensitive Compartmented Information (SCI)		<input checked="" type="checkbox"/>	f. HAVE ACCESS TO U.S. CLASSIFIED INFORMATION OUTSIDE THE U.S., PUERTO RICO, U.S. POSSESSIONS AND TRUST TERRITORIES		<input checked="" type="checkbox"/>
(2) Non-SCI		<input checked="" type="checkbox"/>	g. BE AUTHORIZED TO USE THE SERVICES OF DEFENSE TECHNICAL INFORMATION CENTER (DTIC) OR OTHER SECONDARY DISTRIBUTION CENTER		<input checked="" type="checkbox"/>
f. SPECIAL ACCESS INFORMATION		<input checked="" type="checkbox"/>	h. REQUIRE A COMSEC ACCOUNT		<input checked="" type="checkbox"/>
g. NATO INFORMATION		<input checked="" type="checkbox"/>	i. HAVE TEMPEST REQUIREMENTS		<input checked="" type="checkbox"/>
h. FOREIGN GOVERNMENT INFORMATION		<input checked="" type="checkbox"/>	j. HAVE OPERATIONS SECURITY (OPSEC) REQUIREMENTS	<input checked="" type="checkbox"/>	
i. LIMITED DISSEMINATION INFORMATION		<input checked="" type="checkbox"/>	k. BE AUTHORIZED TO USE THE DEFENSE COURIER SERVICE		<input checked="" type="checkbox"/>
j. FOR OFFICIAL USE ONLY INFORMATION		<input checked="" type="checkbox"/>	l. OTHER (Specify)		<input checked="" type="checkbox"/>
k. OTHER (Specify)		<input checked="" type="checkbox"/>			

**12. PUBLIC RELEASE.** Any information (*classified or unclassified*) pertaining to this contract shall not be released for public dissemination except as provided by the Industrial Security Manual or unless it has been approved for public release by appropriate U.S. Government authority. Proposed public releases shall be submitted for approval prior to release.

☒ Direct ☐ Through (*Specify*):

Commander  
NAVSURFWARCENDIV  
300 Highway 361  
Crane, IN 47522

to the Directorate for Freedom of Information and Security Review, Office of the Assistant Secretary of Defense (Public Affairs)\* for review.  
\* In the case of non-DoD User Agencies, requests for disclosure shall be submitted to that agency.

**13. SECURITY GUIDANCE.** The security classification guidance needed for this classified effort is identified below. If any difficulty is encountered in applying this guidance or if any other contributing factor indicates a need for changes in this guidance, the contractor is authorized and encouraged to provide recommended changes; to challenge the guidance or the classification assigned to any information or material furnished or generated under this contract; and to submit any questions for interpretation of this guidance to the official identified below. Pending final decision, the information involved shall be handled and protected at the highest level of classification assigned or recommended. (*Fill in as appropriate for the classified effort. Attach, or forward under separate correspondence, any documents/guides/extracts referenced herein. Add additional pages as needed to provide complete guidance.*)

Cooperative Engagement Capability (CEC) Classification Guide  
OPNAVINST S5513.3 19 January 1996  
Declassify after system disposal.

**14. ADDITIONAL SECURITY REQUIREMENTS.** Requirements, in addition to ISM requirements, are established for this contract. (*If Yes, identify the pertinent contractual clauses in the contract document itself, or provide an appropriate statement which identifies the additional requirements. Provide a copy of the requirements to the cognizant security office. Use Item 13 if additional space is needed.*)

☐ Yes ☒ No

**15. INSPECTIONS.** Elements of this contract are outside the inspection responsibility of the cognizant security office. (*If Yes, explain and identify specific areas or elements carved out and the activity responsible for inspections. Use Item 13 if additional space is needed.*)

☐ Yes ☒ No

**16. CERTIFICATION AND SIGNATURE.** Security requirements stated herein are complete and adequate for safeguarding the classified information to be released or generated under this classified effort. All questions shall be referred to the official named below.

a. TYPED NAME OF CERTIFYING OFFICIAL

Jeffery D. Duzan

b. TITLE

Contracting Officer's  
Security Representative

c. TELEPHONE (*Include Area Code*)

812-854-5611

d. ADDRESS (*Include Zip Code*)

Commander  
NAVSURFWARCENDIV Code 0621F  
300 Highway 361  
Crane, Indiana 47522

e. SIGNATURE



**17. REQUIRED DISTRIBUTION**

☒

a. CONTRACTOR

☐

b. SUBCONTRACTOR

☒

c. COGNIZANT SECURITY OFFICE FOR PRIME AND SUBCONTRACTOR

☐

d. U.S. ACTIVITY RESPONSIBLE FOR OVERSEAS SECURITY ADMINISTRATION

☐

e. ADMINISTRATIVE CONTRACTING OFFICER

☒

f. OTHERS AS NECESSARY

## SAMPLE STATEMENT OF WORK

FOR SOLICITATION NUMBER N00164-98-R-0027

### 7 SCOPE.

This Statement of Work (SOW) sets forth the efforts required to provide non-personal technical and engineering services to the Naval Surface Warfare Center (NSWC) Crane Division Code 7027 for the United States Marine Corps (USMC) Cooperative Engagement Capability (CEC) Program.

The Contracting Officer Representative (COR) for this delivery order is identified as Penny Smiddie. All email correspondence and electronic data deliverables shall be sent to [smiddie\\_penny@se.crane.navy.mil](mailto:smiddie_penny@se.crane.navy.mil) and all hard copy correspondence and data deliverables shall be sent to:

COMMANDER  
NAVSURFWARCEMDIV CRANE  
CODE 604, BLDG 2044, PENNY SMIDDIE  
300 HIGHWAY 361  
CRANE IN 47522-5001

The Period of Performance for this delivery order is one year.

Note: NAVSURFWARCEMDIV Crane is tasked to using MIL-HDBK-245D guidelines, and as provided by the basic contract Statement of Work (SOW), this Delivery Order (DO) defines various support services to be accomplished by the contractor.

### 8 APPLICABLE DOCUMENTS.

NOTE: The following documents of the revision or issue in effect at the date of Delivery Order or as otherwise specified by the Delivery Order form a part of this Statement of Work to the extent described herein. In the event of conflict or inconsistency between this SOW and the referenced documents, this SOW shall take precedence.

#### 8.1 SPECIFICATIONS.

NONE

#### 8.2 STANDARDS.

MIL-STD-498	Software Development and Documentation
MIL-STD-973	Configuration Management

#### 8.3 OTHER DOCUMENTS.

MIL-HDBK-245D	Preparation of Statement of Work
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### 9 TASK REQUIREMENTS.

The Contractor shall provide engineering and technical services as described in this Statement of Work to NAVSURFWARCEMDIV Crane, Code 7027.

#### 9.1 DOCUMENTATION DEVELOPMENT/REDLINES.

The Contractor shall prepare/update the Software Development Plan and submit to Government in accordance with basic SOW CDRL A001 and paragraph 3.1.1.

The Contractor shall provide necessary program plan information in accordance with basic SOW CDRL A018 and paragraph 3.1.10.1. This information shall be submitted within fifteen days after Contract award and then updates shall be submitted as needed thereafter.

The Contractor shall provide information for all applicable items in the Software Test Plan in accordance with basic SOW CDRL A008 and paragraph 3.1.4.1. This information shall be submitted 20 days after Contract award.

The Contractor shall prepare/update the Software Transition Plan (STrP) and submit to Government in accordance with basic SOW CDRL A013 and paragraph 3.1.5. The STrP shall be submitted 30 days after Contract award.

#### **9.1.1 PROPOSED RELEASE BASELINE.**

For each Proposed Release baseline of the MSC/T software, the Contractor shall prepare the following data items and submit to Government in accordance with the basic SOW:

- a. Provide updates/redlines for all applicable items in the Software Transition Plan (STrP) for each proposed Release baseline in accordance with basic SOW CDRL A013 and paragraph 3.1.5. The STrP updates/redlines shall be submitted 20 days prior to transition date.
- b. Prepare and submit Software Product Specification (SPS) for each proposed Release baseline in accordance with basic SOW CDRL A014 and paragraph 3.1.5. The SPS submittal date shall be the date of the software transition.
- c. Prepare and submit Software Version Description (SVD) for each proposed Release baseline in accordance with basic SOW CDRL A015 and paragraph 3.1.5. The SVD submittal date shall be the date of the software transition.
- d. Provide information/updates for all applicable items in the Software Test Plan for each proposed Release baseline in accordance with basic SOW CDRL A008 and paragraph 3.1.4.1. This information shall be submitted 40 days prior to Acceptance Test date.
- e. Prepare and submit Software Test Description in accordance with basic SOW CDRL A009 and paragraph 3.1.4.2.
- f. Prepare and submit Software Test Report in accordance with basic SOW CDRL A010 and paragraph 3.1.4.2.
- g. Provide information for all applicable items in the Software Test Description (STD) in accordance with basic SOW CDRL A011 and paragraphs 3.1.4.3 and 3.1.4.4.
- h. Provide information for all applicable items in the Software Test Report (STR) in accordance with basic SOW CDRL A012 and paragraphs 3.1.4.3 and 3.1.4.4.

#### **9.1.2 FORMAL RELEASE BASELINE.**

For each Formal Release baseline of the MSC/T software, the Contractor shall prepare/redline the following data items and submit to Government in accordance with the basic SOW:

- a. Provide information/updates for all applicable items in the System/Subsystem Design Description (SSDD) for each approved Release baseline in accordance with basic SOW CDRL A002 and paragraph 3.1.1.2, 3.1.3.1. This information shall be submitted within twenty days after Release approval.
- b. Provide information/updates for all applicable items in the System/Subsystem Specification (SSS) for each approved Release baseline in accordance with basic SOW CDRL A003 and paragraph 3.1.2.1. This information shall be submitted within twenty days after Release approval.
- c. Provide information/updates for all applicable items in the Interface Requirements Specification (IRS) for each approved Release baseline in accordance with basic SOW CDRL A004 and paragraphs 3.1.2.1 and 3.1.2.2. This information shall be submitted within twenty days after Release approval.
- d. Provide information/updates for all applicable items in the Software Requirements Specification (SRS) for each approved Release baseline in accordance with basic SOW CDRL A005 and paragraph 3.1.2.1. This information shall be submitted within twenty days after Release approval.
- e. Prepare/Update and submit Software Users Manual (SUM) for each approved Release baseline in accordance with basic SOW CDRL A006 and paragraph 3.1.2.3. This document shall be submitted within twenty days after Release approval.
- f. Prepare/Update and submit Software Design Description (SDD) for each approved Release baseline in accordance with basic SOW CDRL A007 and paragraph 3.1.3.2. This document shall be submitted within twenty days after Release approval.

#### **9.2 SOFTWARE MODIFICATION/ENHANCEMENTS.**

For the modification/enhancement tasks identified in the following sub-paragraphs, the Contractor shall also perform the following tasks in accordance with the basic SOW:

- a. Evaluate requirements' impacts due to changes in design, hardware configuration, or project resources as per basic SOW paragraph 3.1.2.4.
- b. Conduct Acceptance Testing in accordance with basic SOW paragraph 3.1.4.3.
- c. Conduct System Qualification Testing in accordance with basic SOW paragraph 3.1.4.4.
- d. Transition software in accordance with basic SOW paragraph 3.1.5.

### **9.2.1 3-D DISPLAY SOFTWARE.**

The Contractor shall develop a 3 dimensional version of the CEC "large screen" display software. The Contractor shall integrate this 3-D display software with both the new "large screen" projector/screen system and the individual workstations. This task shall be done in accordance with basic SOW paragraph 3.2.2.5.

### **9.2.2 EVALUATE NEW CORRELATION ALGORITHMS SYNTHESIS TECHNIQUES.**

The Contractor shall evaluate the MSC/T software to most efficiently accomplish correlation of the "real time" (raw CEC) data with the "near real time" (data link) data. The outcome of the correlation shall be the display of a single coherent track, which corresponds to the single unique target identified by each data source. A report containing results of the evaluation shall be submitted to the Government in accordance with basic SOW CDRL A020 and paragraph 3.2.2.1. The report shall be submitted 60 days after Contract award.

### **9.2.3 ADDING NEW CORRELATION ALGORITHMS SYNTHESIS TECHNIQUES.**

If the technique proposed by the Contractor in paragraph 3.2.2 is approved by the Government, the Contractor shall modify the MSC/T software to accomplish correlation of the "real time" (raw CEC) data with the "near real time" (data link) data. The outcome of this modification will be the display of a single coherent track, which corresponds to the single unique target identified by each data source. This modification shall be done in accordance with basic SOW paragraph 3.2.2.4.

## **9.3 SOFTWARE DEVELOPMENT ENVIRONMENT.**

For the duration of the basic SOW, the Contractor shall perform the following tasks in accordance with the basic SOW:

- a. Establish/Maintain Software Development Environment in accordance with basic SOW, paragraph 3.1.1.1.
- b. Provide Government representative access to facilities for review of software products and activities required by the contract, and accounts on appropriate Contractor computer systems in accordance with basic SOW paragraph 3.1.1.3.
- c. Perform Software Configuration Management in accordance with basic SOW CDRL A001 and paragraphs 3.1.6 and 3.1.6 subparagraphs.
- d. Prepare and submit to Government Problem Change Reports in accordance with basic SOW CDRL A016 and paragraph 3.1.6.2.2. Submittal dates shall be the dates on which priority 1 problems are identified and 5 days after priority 2, 3, 4, and 5 problems/enhancements are identified.
- e. Provide Configuration Status Accounting information in accordance with basic SOW CDRL A017 and paragraph 3.1.6.3. Configuration Status Accounting information shall be provided on an as requested/required basis, within 3 days of the request date. It is estimated that this information shall be requested a total of 2 times for this delivery order.
- f. Perform product evaluation in accordance with basic SOW paragraph 3.1.7.
- g. Perform software quality assurance in accordance with basic SOW CDRL A001 and paragraph 3.1.8.
- h. Implement a corrective action system in accordance with basic SOW paragraph 3.1.9.
- i. Provide information for risk management in accordance with basic SOW paragraph 3.1.11.
- j. Use software management indicators to aid in managing the software development process and communicating its status to the Government in accordance with basic SOW paragraph 3.1.12.
- k. Ensure software security and privacy in accordance with basic SOW paragraph 3.1.13.
- l. Utilize, if necessary, subcontractors in accordance with basic SOW paragraph 3.1.14.

## **9.4 IN PROCESS REVIEWS.**

The Contractor shall plan and provide qualified technical, engineering, and/or management personnel to attend In Process

Reviews (IPRs) associated with the USMC CEC project in accordance with basic SOW paragraph 3.1.10.2.

It is estimated that there will be 4 such reviews during the course of this delivery order.

The Contractor shall detail Contractor activities during the reporting month and plans for the following month in a monthly status report in accordance with basic SOW CDRL A019 and paragraph 3.1.10.2.

## **9.5 ON-SITE TEST/DEMONSTRATION SUPPORT.**

The Contractor shall provide on-site technical support to an estimated two field tests and demonstrations in accordance with basic SOW paragraph 3.2.2.6.

## **9.6 TECHNICAL BRIEFING.**

The Contractor shall support the technical briefing of the USMC CEC to Government personnel and organizations in accordance with basic SOW paragraph 3.2.2.15. The briefing efforts shall require the development of briefing literature (basic SOW CDRL A022), attendance at briefings and industry events, and the creation of audio-visual material (basic SOW CDRL A022) which may be used by potential users for the evaluation of USMC CEC concepts. Presentation material shall be submitted to the Government at the briefings. There is an estimated 4 briefings to be held for this delivery order period.

## **10 GOVERNMENT FURNISHED ITEMS.**

The MSC/T software will be provided as Government furnished Information in accordance with basic SOW paragraph 4.

The Contractor shall confirm receipt of GFI in the monthly status report (basic SOW CDRL A019).

## **11 DATA DELIVERABLES.**

<u>DO PARA</u>	<u>DATA DESCRIPTION</u>	<u>DO SOW SEQ NO.</u>	<u>BASIC SEQ NO.</u>	<u>DID NO.</u>
3.1.1	Software Development Plan	1	A001	DI-IPSC-81427
3.1.1	Program Plan	2	A018	DI-MGMT-80909
3.1.1 9.1.1	Software Test Plan	3	A008	DI-IPSC-81438
3.1.1 9.1.1	Software Transition Plan (STrP)	4	A013	DI-IPSC-81429
9.1.1	Software Product Specification	5	A014	DI-IPSC-81441
9.1.1	Software Version Description	6	A015	DI-IPSC-81442
9.1.1	Software Test Description	7	A009	DI-IPSC-81439
9.1.1	Software Test Report	8	A010	DI-IPSC-81440
9.1.1	Software Test Description Info	9	A011	DI-IPSC-81439
9.1.1	Software Test Report Info	10	A012	DI-IPSC-81440
9.1.2	System/Subsystem Design Description (SSDD)	11	A002	DI-IPSC-81432



9.1.2	System/Subsystem Specification 12	A003		DI-IPSC-81431
9.1.2	Interface Requirements Specification (IRS)	13	A004	DI-IPSC-81434
9.1.2	Software Requirements Specification (SRS)	14	A005	DI-IPSC-81433
9.1.2	Software Users Manual (SUM)	15	A006	DI-IPSC-81443
9.1.2	Software Design Description	16	A007	DI-IPSC-81435
9.2.2	Scientific and Technical Report	17	A020	DI-IPSC-80711
9.3	Technical Report - Study/Services	18	A016	DI-MISC-80508
9.3	Product/Asset Configuration Data Information Packet	19	A017	DI-CMAN-81553
9.4	Status Report	20	A019	DI-MGMT-80368
3.2.2.15	Presentation Material	21	A022	DI-ADMN-81373